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AVIATION SAFETY COMMISSION ACT OF 1986

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

S. 2417

TO ESTABLISH THE AVIATION SAFETY COMMISSION, AND FOR OTHER PURPOSES

JULY 17, 1986

Printed for the use of the
Committee on Commerce, Science, and Transportation

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AVIATION SAFETY COMMISSION ACT OF 1986

THURSDAY, JULY 17, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON AVIATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:01 a.m., in room SR-253, Russell Senate Office Building, Hon. Nancy Kassebaum (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Steve Johnson, staff counsel, and Steve Palmer, minority professional staff members.

OPENING STATEMENT BY SENATOR KASSEBAUM

Senator KASSEBAUM. The hearing will please come to order.

It is a pleasure to welcome the many witnesses who will testify this morning. I am very appreciative of the fine testimony that we have had at these hearings. The subcommittee has held five hearings this year on aviation safety and safety related issues. I would also like to say it is my understanding that many of those testifying appreciate the conventions of the Senate side; I believe the last hearing that Chairman Minetta had on the House side went from 10 in the morning until 10 o'clock at night. We are usually not that long-winded, but neither do we usually have the rollcall votes that interrupt the House.

Today's hearing has two purposes. One is to follow up on the subcommittee's hearings last October when we examined in detail a number of safety issues. Among those issues were weather hazards, such as wind shear, the air traffic control system, and the FAA's aircraft inspection program. This hearing will be used in part to discuss the problem areas identified earlier, and to look at any new developments.

The second reason for this hearing is to examine S. 2417, legislation offered by the Democratic leader, Senator Byrd, to establish an independent Aviation Safety Commission to study and make recommendations regarding aviation safety. I believe that this kind of independent commission could play a useful role in evaluating the current state of aviation safety.

In saying that, I in no way mean to downgrade the fine work of Secretary Dole or Admiral Engen, the head of the FAA. Secretary Dole and Admiral Engen have clearly given high priority to safety issues, and have taken several initiatives to address problem areas. I would also note that aviation safety is the highest priority of this subcommittee, and I appreciate very much the work of Senator Exon, as the ranking member, who has contributed a great deal to

the subcommittee hearings that we have had. We have spent considerable time and effort on what is a very important matter.

Even with all of these efforts, however, I think that an independent assessment by qualified people could provide constructive criticisms and suggestions for aviation safety. While I believe our air travel system is safe today, I also believe it can be even safer in the future, and we should spare no effort to make that happen.

Senator Exon, do you have an opening statement?

OPENING STATEMENT BY SENATOR EXON

Senator EXON. Yes; I do, Madam Chairman. Thank you very much.

First, I commend you for calling these hearings this morning in order that the Aviation Subcommittee may hear testimony on S. 2417, the Aviation Safety Commission Act, which many of us have cosponsored. I wish to take this opportunity also to thank and commend Senator Byrd for his leadership in this matter. He and I have discussed many times our mutual concern with the current state of air safety, and how best to address this critically important issue.

For some time I have been keenly interested in the correlation, if there is one, between the deregulation of our domestic commercial airline industry and the quality of safety of air travel. I have been, and continue to be, concerned with what I see as possible cost saving short cuttings that may interfere in some way with safety so that commercial air carriers may remain competitive in the marketplace.

This practice, if real, must stop. I believe it is the direct responsibility of the Federal Aviation Administration to ensure that it is eliminated.

The bill we are hearing this morning, S. 2417, I believe to be a step in the right direction in our efforts to address the aviation safety question. The panel created by this bill will provide us with an independent review of the FAA and aviation safety and make legislative recommendations it believes necessary. This bill is not, in my opinion, designed as a criticism of the FAA. To the contrary, it is offered only to assist the FAA in its new and broadened obligations brought about by deregulation.

Finally, I wish to express my complete agreement with Senator Byrd, the principal sponsor, in the stated belief that the findings and recommendations of this Commission will be a valuable contribution when we consider the reauthorization of the FAA prior to its expiration in September of next year. Again, I wish to thank Senator Kassebaum for calling this hearing, and I look forward to the testimony, especially that from the Democratic leader.

Thank you very much, Madam Chairman.

Senator Hollings has an opening statement he would like to have included in the hearing record.

[The statement and bill follows:]

OPENING STATEMENT BY SENATOR HOLLINGS

Madam Chairman, we once again are turning our attention to a matter that simply will not go away. It has been a concern since man first began to fly, but in recent years that concern has been transformed into a feeling of near-panic for a

large portion of the flying public. And as one who must fly on a fairly regular basis, I can say that I am deeply troubled with our current situation.

I am speaking of the matter of the aviation safety. Last year, nearly 2,000 people perished in accidents worldwide. Five hundred and twenty-six of those tragic deaths occurred while flying aboard U.S. air carriers. And while there have been relatively few accidents involving passenger deaths thus far in 1986, we continue to see increasing numbers of near misses between aircraft in flight and on the ground.

Just as importantly, we are seeing a continuing flow of stories in both the electronic and the print media on aviation safety. It doesn't matter that our airlines are still the safest mode of transportation available—if the people are constantly being told of deficiencies and continuing problems, action must be taken. Our Democratic Leader, Senator Byrd, who I am happy is here with us today, has done an excellent job in going to the Senate floor and highlighting those facts.

While the airlines themselves are ultimately responsible for ensuring the safe operation of their aircraft, the burden of establishing and maintaining the standards by which the airlines fly falls on the FAA. Since deregulation, many have questioned whether the FAA is carrying out its mandate for safety. I am constantly being told of instances where the FAA, especially under the present Administration, has chosen to take a "hands-off" approach to safety, and has eschewed the strong leadership role that it is supposed to provide.

We deregulated the airlines in 1978, but we did not deregulate safety. No one has ever said that that was our intention. But I am afraid that at various times in recent years, that is precisely what appears to have happened.

The effect of airline deregulation in diminishing the perceived margin of aviation safety is only one reason why I became a cosponsor to S. 2417, introduced by Senator Byrd. The other is that I strongly believe that the time has come to review how and where the FAA could best perform its job. Should the agency continue under the umbrella of the Department of Transportation? Or should it be made an independent agency?

Various aviation user groups have their own ideas, each of which deserves the consideration of others not directly associated with the day-to-day operations of the current system. A study commission would be well equipped to evaluate the merits of each respective proposal, submitting recommendations on the best course for the future.

The timeliness of the proposed Safety Commission cannot be ignored. The existing authorizations for the FAA expires on September 30, 1987. The results of any review must be made available well in advance of that time for them to be adequately reviewed and incorporated in the Committee's deliberations.

Madam Chairman, I want to commend you and the Ranking Member of the Subcommittee, Jim Exon, for taking the initiative in scheduling this hearing. I believe the issue of aviation safety merits continual oversight and these hearings will help us to accomplish that task. I also believe enacting S. 2417 would be an enormous benefit to the Subcommittee in fulfilling that oversight mandate.

99TH CONGRESS
2D SESSION

S. 2417

To establish the Aviation Safety Commission, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 7 (legislative day, MAY 5), 1986

Mr. BYRD (for himself, Mr. HOLLINGS, Mr. EXON, Mr. FORD, Mr. ROCKEFELLER, and Mr. PROXMIRE) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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A BILL

To establish the Aviation Safety Commission, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Aviation Safety Commission Act of 1986".

COMMISSION ESTABLISHED

SEC. 2. (a) There is established a Commission to be known as the Aviation Safety Commission (hereinafter referred to as the "Commission").

(b) The Commission shall be composed of seven members appointed by the President, by and with the advice and consent of the Senate. Appointees to the Commission shall—

(1) possess extensive experience and expertise at the highest executive levels of corporate management;

(2) during the period of service on the Commission—

(A) have no financial investment in any corporation or business concern engaging in air commerce or any aviation related industry, unless such investment is in a trust in which such an appointee has no—

(i) knowledge of such investment; and

(ii) control over the management of such investment;

(B) receive no compensation for any service performed before appointment to the Commission for any corporation or business concern engaging in air commerce or any aviation related industry; and

(C) perform no service for any such corporation, business concern, or industry;

(3) not have been an employee or officer of the Federal Aviation Administration before appointment to the Commission; and

(4) not be an employee or officer of the Federal Aviation Administration.

(c) For the purpose of subsection (b), the term "air commerce" has the same meaning as such term is defined pursuant to section 101(4) of the Federal Aviation Act of 1958 (49 U.S.C. 1301(4)).

(d) The President shall appoint one of the seven members to serve as Chairman of the Commission.

(e) Any vacancy in the Commission shall not affect its powers, but shall be filled in the same manner in which the original appointment was made.

(f) Four members shall constitute a quorum, but a lesser number may hold hearings.

(g)(1) The Commission shall hold its first meeting within thirty days after the appointment of all members.

(2) The Commission shall meet at the call of the Chairman or a majority of the members.

(h) Members of the Commission shall serve until the expiration of the Commission pursuant to section 3(f).

FUNCTIONS OF THE COMMISSION

SEC. 3. (a) The Commission shall make a complete study of the organization and functions of the Federal Aviation Administration and the means by which such Administration may most efficiently and effectively perform the responsibilities assigned by law and increase aviation safety.

(b) In conducting such study, the Commission shall consider whether—

(1) the Federal Aviation Administration has been provided adequate resources and has adequately utilized the resources provided to ensure aviation safety;

(2) the dual responsibilities of the Federal Aviation Administration of promoting commercial aviation and ensuring aviation safety are in conflict, and whether such conflict impedes the effective maintenance and enhancement of aviation safety;

(3) the Federal Aviation Administration should be reorganized as an independent Federal agency with the promotion, maintenance, and enhancement of aviation safety as the sole responsibility of the agency;

(4) the promotion of commercial aviation should be assigned as a responsibility to another agency of the Federal Government;

(5) airline deregulation has an adverse effect on the margin of aviation safety, including a review of whether the practice of airline self-compliance with respect to aviation maintenance standards is an outmoded approach in an environment designed to maximize cost-savings; and

(6) the desirability of making mandatory certain or all safety recommendations issued by the National Transportation Safety Board.

(c) The study shall include findings and recommendations, including any recommendations for legislative action, regarding—

(1) the most appropriate and effective organizational approach to ensuring aviation safety; and

(2) measures to improve the enforcement of Federal regulations relating to aviation safety.

(d) In conducting such study the Commission shall consult with the National Transportation Safety Board, and a broad spectrum of representatives of the aviation industry, including—

(1) air traffic controllers;

(2) representatives of the commercial aviation industry;

(3) representatives of airways facilities technicians;

(4) independent experts on aviation safety;

(5) former Administrators of the Federal Aviation Administration; and

(6) representatives of civil aviation.

(e) No later than one year after the date of appointment of all members of the Commission, the Commission shall

submit a report of the study conducted pursuant to this Act to the President and to each House of the Congress. Such report shall contain a detailed statement of the findings and conclusions of the Commission together with recommendations for legislative and administrative actions.

(f) The Commission shall cease to exist one year after the date of appointment of all members.

POWERS AND ADMINISTRATIVE PROVISIONS

SEC. 4. (a) The Commission may, for the purpose of carrying out the provisions of this Act, hold such hearings, sit and act at such times and places, take such testimony, receive such evidence, and publish such reports as the Commission considers appropriate.

(b)(1) Subject to such rules as may be adopted by the Commission, the Chairman, without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 of subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, is authorized—

(A) to appoint and fix the compensation of such staff personnel as he deems necessary, including an executive director who may be compensated at a rate not in excess of that provided for level V of the Executive Schedule in title 5, United States Code, and

(B) to procure the services of experts and consultants in accordance with section 3109 of title 5, United States Code.

(2) Any person appointed executive director pursuant to subparagraph (A) of paragraph (1) of this section shall meet the same qualifications required of members pursuant to paragraphs (2), (3), and (4) of section 2(b).

(c) Each department, agency, and instrumentality of the executive branch of the Federal Government, including independent agencies, shall furnish to the Commission, upon request made by the Chairman, such information as the Commission deems necessary to carry out its functions.

(d) Upon request of the Commission, the head of any Federal agency is authorized to detail, on a reimbursable basis, any of the personnel of such agency to the Commission to assist the Commission in carrying out its duties.

(e) The Administrator of General Services shall provide to the Commission on a reimbursable basis such administrative support services as the Commission may request.

(f) The Commission may use the United States mail in the same manner and under the same conditions as other departments and agencies of the United States.

(g) Any member or agent of the Commission may, if so authorized by the Commission, take any action which the Commission is authorized to take by this section.

COMPENSATION OF MEMBERS

SEC. 5. Members of the Commission shall serve without compensation, but shall be reimbursed for travel or transportation expenses under subchapter I of chapter 57 of title 5, United States Code, while away from home or a regular place of business and engaged in the actual performance of duties vested in the Commission.

AUTHORIZATION OF APPROPRIATIONS

SEC. 6. There are authorized to be appropriated $2,500,000 to carry out the provisions of this Act.

○

Senator KASSEBAUM. Thank you.

It is a pleasure to welcome the Democratic leader before the subcommittee, someone who has taken a great interest in aviation safety issues. Senator Byrd, welcome.

STATEMENT OF HON. ROBERT C. BYRD, U.S. SENATOR FROM WEST VIRGINIA

Senator BYRD. Thank you, Madam Chairman.

Let me commend you for scheduling these hearings on the issue of aviation safety. This is an issue about which there has been growing public concern since the enactment of the Airline Deregulation Act of 1978. With each report of a commercial air carrier crash, as well as reports of other safety related incidents, the American public has become increasingly concerned about aviation safety.

There is reason for concern. According to the National Transportation Safety Board, 1985 was the worst year for domestic commercial aviation since 1977. Last year there were 526 fatalities from all U.S. air carriers compared to 655 fatalities in 1977. The FAA and representatives of the airline industry have argued that the safety of the domestic passenger carriers has improved in the years since deregulation.

However, this assessment is based solely upon the number of accidents and fatal accidents in any given year.

Madam Chairman, do you and Senator Exon have copies of my statement? Have you been supplied with copies of my statement?

Senator EXON. Yes, I have it.

Senator KASSEBAUM. Yes, we do.

Senator BYRD. I thank you. That approach is not necessarily the most useful indicator of the current status of aviation safety. Focusing exclusively on accidents is of limited usefulness because it ignores any consideration of incidents which did not become accidents. It is often only luck that separates incidents and accidents.

For example, on May 17, 1986, an American Airlines 727 passenger jet and a USAir DC-9 came very, very close to a disastrous collision at Chicago's O'Hare Airport. Both aircraft were cleared by an air traffic controller for takeoff at the same time from intersecting runways. It was only because the USAir co-pilot happened to notice the oncoming American airlines jet, and the pilot was able to take last-minute emergency action that a disaster was avoided for the 224 passengers and crew on board the two aircraft.

There are other data which should be included in any consideration of the status of aviation safety. A more complete picture of aviation safety is provided by considering data regarding accidents as well as data on near midair collisions and surface operational errors; for example, runway incursions. Such data collected and reported by the FAA indicate that the number of near midair collisions increased from 568 in 1980 to 758 in 1985, an increase of almost 200, or 190, to be exact, near midair collisions. That was an increase of 33 percent.

There are similar indications that the number of surface operational errors increased from 87 in 1980 to 103 in 1985, a 21 percent increase. I believe that a more complete assessment of the

status of aviation safety can be rendered by considering what I will call aviation safety incidents. This broader concept includes all reported aviation accidents, reported near midair collisions, and reported surface operational errors involving section 121 and 135 certificated air carriers, which means both major and commuter.

From this perspective, since the enactment of the Airline Deregulation Act of 1978, FAA data, when adjusted to take into account the increases in traffic volumes since airline deregulation, indicate a dramatic decline in the margin of aviation safety. Specifically, the indications are that aviation safety incidents have been occurring more frequently since deregulation relative to departures, relative to aircraft miles, and relative to aircraft hours.

These data are presented graphically in charts 1 through 3 here before us. These charts in miniature, I believe, are included in my testimony for the committee's attention. The charts present data for three key indicators of airline activity. One, the number of revenue aircraft departures. Two, revenue aircraft miles. And three, revenue hours flown.

Aviation safety incidents are plotted against these indicators to provide a picture of the margin of safety. However, it is important to point out that these graphs were based on very limited FAA data, and that the quality of the data which are available from the FAA may be limited as well. Indeed, FAA's data collection, verification, and data base maintenance and management practices have been identified by the National Transportation Safety Board and the General Accounting Office as a problem area.

Without an adequate data base, FAA is severely limited in its ability to anticipate potential aviation safety problems, and to define approaches to the resolution of such problems. Unfortunately, for the time being, anyone attempting to assess the status of aviation safety must use FAA data. Any such assessment must acknowledge the serious limitations in the quality and quantity of those data.

With those caveats in mind, then, I believe that the data do provide an indication of the margin of aviation safety, so let me turn briefly now to the charts in my testimony. Chart 1, that is, to the upper left, represents data from 1975 to 1985 on the number of airline departures per incident. The chart will show that in 1975 an incident was reported for every 12,805 departures. By 1980, an incident was reported for every 7,377 departures. This was a 42-percent decline in the number of departures per incident, or between incidents, during the period 1975 to 1980.

However, during the period 1980–82, members will note there was a 63-percent increase in the number of departures per incident. This is an indication that the margin of safety improved during that period, 1980–82. Then during the period 1982–85, we see the margin of safety declining again as the number of departures per incident decreased 56 percent, from 12,000 in 1982 to 5,300 departures per incident in 1985.

Chart 2, which is to your right, presents a similar picture during the same time period based on the number of airline revenue miles per incident. Chart 2 shows that in 1975 the number of revenue aircraft miles per incident was 5.5 million. This dropped, as the chart will show, to 3.5 million aircraft miles per incident in 1980.

Then the margin of safety rose between 1980–82 to 6 million revenue aircraft miles per incident. But beginning in 1982, the number of revenue aircraft miles per incident dropped drastically to 2 million revenue aircraft miles per incident.

Chart No. 3 presents the decline in the margin of safety in terms of the number of revenue aircraft hours per incident. The data here again indicate a declining margin of safety as the number of revenue aircraft hours per incident decreased from 13,900 in 1975 to 8,600 revenue aircraft hours per incident in 1980, then the margin of safety again rose in 1982, when there were 14,800 revenue aircraft hours per incident, and then again that same drastic drop to 7,000 revenue aircraft hours per incident in 1985.

So, all of these charts show an improvement in the margin of safety from 1980 to 1982. This may be a reflection of the 1981 PATCO strike, when the FAA reduced the volume of air traffic by imposing limits on the number of flights at the busiest airports to compensate for the reduction in the number of air traffic controllers manning the towers during the strike.

The result of such controls appears to have seen a significant improvement in the margin of safety. That has some interesting implications for the present situation. Based on its assessment of the status of the situation of the Nation's air traffic control work force, the General Accounting Office has suggested that the FAA should consider imposing controls on the growth of air traffic until that work force is adequately staffed. The data I have here presented indicates that such an approach could have beneficial results.

Madam Chairman and members of the subcommittee, I believe that the data that I have presented here indicate that the margin of aviation safety has declined significantly between the years 1975–85. Simply put, the problem is that the skies have gotten more crowded since deregulation, and there is no indication that the future will bring less crowded skies.

Since 1978, there has been a significant growth in the number of commercial passenger airlines, as well as in the number of aircraft operated by such carriers. For example, prior to the enactment of the Airline Deregulation Act of 1978, there were a total of 29 carriers, including 10 major carriers and 19 commuter airlines. In 1985, according to FAA information, there were a total of 220 air carriers, including 60 major carriers and 160 commuter airlines.

In May of this year there were 307 passenger air carriers, an increase of almost 40 percent over the previous year. Of the 307 passenger air carriers, 116 are major air carriers, and 191 are commuters. In addition, the number of aircraft operated by the major air carriers and the commuter airlines has increased steadily since deregulation. In 1984, the total commercial passenger fleet was 3,824 aircraft, a 78 percent increase over the 2,145 aircraft operated in 1978.

The largest growth in the number of aircraft occurred in the commuter fleet. In 1978, commuter airlines operated a fleet of about 500 aircraft. By 1984, commuter airlines operated a fleet of 1,132 aircraft, an increase of 126 percent. One disturbing phenomenon closely related to the growth of the airline industry is the declining level of pilot experience. The rapid expansion of the industry has resulted in record levels of pilot hiring by airlines.

For example, in 1985, the airlines hired more than 8,000 pilots, putting a severe strain on the existing pool of available experienced pilots. The declining level of pilot experience is attributed in large measure to high pilot turnover at commuter airlines. Commuter airlines have been experiencing high pilot turnover as their pilots, trained at the expense of the commuter airline, are moving to jobs with the major air carriers.

For example, in 1985 Henson Airlines is reported to have lost an average of one pilot per week to the major airlines. In 1985, Henson lost 70 of its 220 pilots. In an effort to cope with high pilot turnover, the commuter airlines have been lowering hiring standards. It would appear that based on comments made by former National Transportation Safety Board Chairman Jim Burnett, in an appearance before the Appropriations Subcommittee on Transportation in March of this year, that the Nation's commuter airlines have been scraping the bottom of the barrel in their search for pilots.

A key indicator of the declining level of pilot experience is the number of hours a pilot or first officer has spent in the cockpit. In 1983, only 8 percent of the pilots flying for commuter airlines had fewer than 2,000 flight hours. By 1985, 23 percent of commuter pilots had fewer than 2,000 hours, and it should be noted that the problem of pilot experience is not confined to commuter airlines.

According to Future Aviation Professionals of America, there has also been a steady decline in the experience of pilots hired by the major airlines. For example, in 1983 pilots flying for major airlines had an average of 2,342 hours of flight experience in jet aircraft. In 1985, they had only 818 hours in jet aircraft. Compounding the problem is the fact that over the next 20 years approximately 70 percent of the pilots employed by the major airlines are expected to retire.

So, the question for the future is where and how will an expanding passenger airline industry find new pilots. Traditionally the major airlines have relied on the American military for pilots. At one time almost 75 percent of the pilots employed by the major airlines were former Navy or Air Force pilots. Today less than one-third of the pilots employed by major airlines are former military pilots, in part because the military is training fewer pilots.

In view of the prospects for continued growth of the airline industry, declining levels of pilot experience may gain increasing prominence as a significant factor in aviation safety incidents. According to the FAA's long-term forecast, the domestic airline industry is expected to continue the strong growth enjoyed since deregulation. For example, the FAA expects that enplanements for major domestic carriers will increase almost 62 percent during the forecast period of 1985–97. Enplanements for commuter airlines are expected to increase 102 percent over the forecast period. The growth expected by the FAA in the airline industry will bring increased burdens on FAA traffic control systems and other services necessary to manage the increasing volume of air traffic which will be using the Nation's air space.

For example, the FAA expects the number of aircraft operations at FAA towered airports to increase 46 percent over the forecast period of 1985–1997. The question is whether the FAA has the re-

sources and the capability to handle the challenges posed by the growth in the domestic airline industry.

For example, serious concern has been expressed by the General Accounting Office about whether the air traffic control system is adequate to handle the greater work loads resulting from the increases in air traffic volume expected to occur between now and 1997. Indeed, there is concern that even at current levels of air traffic, the Nation's aviation safety system has been pushed to and perhaps beyond its limits.

Consider, for example, that although air traffic volume has increased in the years since airline deregulation, the number of air traffic controllers has decreased. Prior to the PATCO strike on July 31, 1981, the air traffic control system employed 13,205 full performance level controllers. As of April 30, 1986, according to the FAA, the system employed 8,861 full performance level controllers, in other words, 4,344 fewer controllers than before the PATCO strike.

FAA officials have expressed confidence in the traffic control system, and the FAA is in the process of trying to add 500 controllers per year to its work force for fiscal years 1986 and 1987. But the GAO's analysis of the FAA's air traffic controller work force suggests doubts about whether the air traffic control system will have an adequate number of full performance level controllers to handle the increases in air traffic expected from now until the end of the decade and beyond.

The March 7, 1986, issue of the Washington Post contained a report on the results of a study of the Nation's air traffic controllers by the General Accounting Office. The GAO report is based upon a survey of 4,500 radar qualified controllers and other personnel with the air traffic control system. According to the Post story, the GAO found: One, 70 percent of the controllers in a systemwide survey reported that they are handling more traffic than they should handle; two, the FAA has met its goal of about 12,500 controllers compared with 16,200 before the strike, but as fewer controllers of the highest experience level, 8,300 today compared with the 13,200 in July 1981; three, retirement of experienced controllers will be a greater problem than the FAA has estimated because of controller disgust with management and fears of changes underway in the Federal retirement system.

According to the Post account, 84 percent of controllers and 81 percent of the supervisors eligible to retire in the next 2 years said they will do so. Four, air traffic is growing rapidly, so the controller workload will likely continue to be of concern for some time; five, 60 percent of controllers said they are working too long daily without a break. A substantial number of supervisors agreed. Six, the FAA is heavily dependent on controller overtime, 908,000 hours in fiscal 1985 compared with 377,000 hours in fiscal 1980. Based on these findings, the GAO has suggested that it would be prudent to limit the growth in air traffic before the air traffic control system loses its proper margin of safety.

The General Accounting Office report confirms the uneasy picture emerging from other studies done on the air traffic control system since the PATCO strike in 1981. Now, what is the FAA's response to the GAO report? The New York Times of March 18,

1986, carried a story which bore the headline, "Air Safety Chief Minimizes Survey Findings." The Times story indicated that the FAA essentially disregarded the GAO study. Indeed, GAO representatives who conducted the study of air traffic controllers told a house subcommittee that officials of the FAA had belittled their study of the air traffic control work force, and later dismissed the finding of the study as just another survey.

At the beginning of its study, the General Accounting Office presented the questionnaire to be used to gather information to the FAA for the FAA's comments and suggestions. According to the Times story, the FAA's response was "that the FAA could derive nothing of value from the questionnaire." Incredibly, the FAA apparently dismissed the GAO findings as just another survey, and FAA officials said that controllers were predictable complainers, so there, Madam Chairman, we have it. There is nothing wrong with the air traffic control system except that the controllers are predictable complainers.

Well, I have been concerned about what appears to be the deteriorating condition of the Nation's air safety system. I know many of my colleagues share my concern that the safety of the American public may be threatened by the weakening of the Nation's air safety systems as the result of overworked personnel, attrition, and other factors. In addition, concern has been expressed that the competitive economic environment established by airline deregulation may have created incentives for cost conscious airlines to cut costs and improve profits by cutting aircraft maintenance budgets and maintenance personnel.

Now, I say very carefully that the competitive economic environment established by airline deregulation may have created the incentives for cost conscious airlines to cut costs and to improve profits by cutting aircraft maintenance budgets and maintenance and inspection personnel. The growth in the number of airlines and the number of aircraft in the commercial passenger fleet makes it difficult for FAA to ensure that the airlines are conducting proper aircraft maintenance practices.

The problem is compounded by the decreases in the number of the FAA inspectors to do the job. In 1986, there are 30 percent fewer FAA inspectors than there were in 1978. This decrease in the number of inspectors has occurred while the number of air carriers has increased over 100 percent. In testimony before the Transportation Appropriations Subcommittee on March 19 of this year, Jim Burnette, Chairman of the National Transportation Safety Board, and I am glad he is being renominated to that position, commented that the FAA does not have an adequate airline maintenance surveillance system in place.

Mr. Burnette noted that while the FAA has improved its efforts in airline inspections without more inspectors it is difficult for the FAA to be more aggressive. It is clear that the FAA is facing significant challenges in the face of the explosive growth of the commercial passenger airline industry since airline deregulation. The adequacy of the FAA's efforts to conduct surveillance of the airline industry to ensure compliance with Federal regulations regarding aircraft maintenance and airline operations has been called into question by the General Accounting Office and others.

Over the years, the FAA officials have reiterated the Agency's policy that safety is a major responsibility and goal of the FAA. However, a statement of policy and the implementation of that policy are often not the same. When the Airline Deregulation Act was enacted in 1978, Congress affirmed as a matter of policy that the implementation of the act "result in no diminution of the highest standard of safety in air transportation attained in the United States at the time of the enactment of such act."

Clearly, 8 years after the enactment of Public Law 95-504, that essential policy goal has yet to be achieved. Part of the difficulty may be the conflicting statutory duties given to the FAA. These duties to promote commercial aviation on the one hand and aviation safety on the other form the core of the Nation's aviation policy. And they may at times be incompatible one with the other.

Section 103(a) of the Federal Aviation Act of 1958 directs the FAA Administrator to consider the regulation of air commerce in such manner as to best promote its development and its safety. The Administrator is to consider the promotion, encouragement, and development of civil aeronautics to be in the public interest. Shortly after the enactment of the Airline Deregulation Act, Congress expressed concern that the conflict between FAA's responsibility to ensure safety and to promote civil aeronautics could adversely affect aviation safety.

A 1980 congressional report questioned whether FAA's dual responsibilities are appropriate to the Agency's mission or whether they present contradictions that impair proper agency function in the context of the historical evolution of the airline industry. The report concluded that the FAA's conflicting policy goals were providing inadequate policy direction and that this was hurting Government efforts and could eventually lead to a situation that would endanger public safety.

Madam Chairman, since that report was published 6 years ago, there is still reason for concern. For example, in January 1984, the General Accounting Office released a report which was critical of the FAA's safety standards for small passenger aircraft. The report found that FAA standards for such aircraft were lower than for larger commercial passenger aircraft.

The General Accounting Office report indicated that the FAA did not impose more stringent safety standards on small passenger craft because the cost of such standards would be too financially burdensome on the industry. The report included an FAA comment which noted that the imposition of such a burden would frustrate one of the basic purposes of the FAA; namely, to promote aviation in this country. Indeed, the FAA often provides assistance to the very air carriers that it shuts down for safety-related violations.

A report on the FAA and its inspections of commuter airlines in the June 10, 1985, issue of U.S. News & World Report reviewed several cases where the FAA had extended its help to the very airlines which the Agency had cited for serious safety related deficiencies. When the FAA shuts down a carrier, the U.S. News report noted the FAA will try to get it back in operation.

In particular, the report noted that the FAA had played a major role in helping Provincetown-Boston Airlines back in service after the carrier's operating license was lifted for falsifying records. Ac-

cording to the U.S. News story, the airline resumed operations in a short period of time and then was involved in a crash near Jacksonville, FL, which killed 13 persons on December 6, 1984.

In view of the declining margin of aviation safety and the questions raised about the ability of the FAA to meet the challenges brought by airline deregulation, I believe that it is time for an intensive objective reexamination of the FAA, the Nation's aviation safety policy, and the impact of airline deregulation on aviation safety.

In particular, it is time to consider whether the FAA has been provided adequate resources and whether it has used such resources effectively and efficiently to ensure aviation safety and whether the conflict between the FAA's responsibilities defined in section 102 of the Federal Aviation Act of 1958 impedes aviation safety.

These concerns prompted me to introduce S. 2417, the Aviation Safety Commission Act, to address the issues that we have raised here today. The bill was introduced on May 7 of this year. It has 15 cosponsors, including the distinguished chairman of this subcommittee, Senator Kassebaum, the distinguished ranking member of the subcommittee, Senator Exon, as well as other distinguished members of the subcommittee, such as Senators Goldwater and Ford, and it is cosponsored by my distinguished colleague, Mr. Rockefeller, and by other members of the full committee, Senators Kasten, Long, and Riegle.

It should be noted that the chairman of the Appropriations Subcommittee on Transportation, Senator Andrews, and the ranking member of that subcommittee, Senator Chiles, are also cosponsors of this legislation. This bill directs the President to appoint a seven-member blue ribbon commission, the Aviation Safety Commission, to make a complete study of the organization and the functions of the Federal Aviation Administration and the means by which the FAA may most efficiently and effectively enhance aviation safety.

The members of the Commission are to possess extensive experience and expertise at the highest levels of corporate management. To ensure the independence of the Commission's deliberations and judgment, this bill provides that members of the Commission shall have no ties to the commercial aviation industry or to the Federal Aviation Administration. The Commission is directed to consider whether the FAA has been provided adequate resources to ensure aviation safety and to consider whether the dual responsibilities of the FAA are in conflict, and whether any such conflict impedes aviation safety.

The Commission is also to consider whether the FAA should be reorganized as an independent Federal agency with aviation safety as its sole responsibility, and whether airline deregulation has had an adverse impact on the margin of safety. This should include a review of whether the practice of airline self-compliance with maintenance standards is an outmoded approach in an environment designed to maximize cost savings.

The Commission is directed to consider whether it is desirable to require that when the National Transportation Safety Board issues recommendations related to aviation safety some or all of those

recommendations be made mandatory. In the exercise of its duties, the Commission is to consult with a broad spectrum of representatives of the aviation industry, and to consult with the National Transportation Safety Board. One year from the date of enactment, the Commission is to submit a report to the President and to the Congress containing the Commission's findings and recommendations, including any recommendations for the legislation.

Finally, the bill authorizes $2.5 million to support the activities of the Commission. I believe, Madam Chairman, that the time has come for a thorough independent examination of the aviation safety issues that have been raised here today. Such an assessment will make a valuable contribution to congressional efforts during the consideration of aviation issues which are certainly to begin next year with the reauthorization of the Airport and Airway Improvement Act of 1982.

There has been a dramatic decline, may I say, in summing up, Madam Chairman, a dramatic decline in the margin of aviation safety. Aviation safety incidents have been reported more frequently since airline deregulation. Two, for a brief period from 1980 to 1982, there was a marked improvement in the margin of aviation safety. This appeared to be a result of the imposition of limits of air traffic by the FAA. The FAA imposed such controls during and for a period after the air traffic controllers' strike in 1981.

We see this reflected on the charts before the subcommittee. This suggests that the reimposition of such controls could improve the margin of safety.

Three, there is concern that even at current levels of air traffic, the Nation's air traffic control system has been pushed to and sometimes beyond its limits. Given the explosive growth in the domestic aviation industry, there is concern for the future.

Four, in the face of aviation industry growth, there is concern that the FAA does not have the resources to provide adequate surveillance of the airline industry to ensure compliance with Federal regulations regarding aircraft maintenance and airline operations.

Five, there is a policy conflict between FAA's statutory duties to promote commercial aviation and aviation safety. The conflict may have an adverse effect on the margin of aviation safety.

Six, in view of the declining margin of aviation safety and the concerns regarding the FAA's ability to meet the challenges brought by airline deregulation, it is time for an intensive, probing, objective reexamination of the FAA, the Nation's aviation safety policy, and the impact of airline deregulation on aviation safety.

And seven, S. 2417, the Aviation Safety Commission Act, is a response to these concerns. I am confident that the distinguished chairman of this subcommittee and the distinguished ranking member and the other members of the subcommittee will do everything they possibly can to prevail on the chairman and ranking member of the full committee to schedule a markup for S. 2417 as soon as possible, and that the bill be reported by the committee soon thereafter.

I thank the members of the subcommittee for their support for this measure, and I thank them for the courtesies that they have extended on this day to me as I have attempted to present this somewhat lengthy statement.

Senator KASSEBAUM. Thank you very much, Senator Byrd. I would like to ask Senator Exon to start the questioning.

Senator EXON. Madam Chairman, thank you very much.

Senator Byrd, I have listened with great interest to your excellent presentation. It is well detailed, and has some facts and figures in it that should be, I think, alarming to all concerned with aviation safety. I think this includes not only those involved in the industry and those of us who have responsibilities here in the legislative areas, but the people of the United States as a whole.

Let me make a statement or two. You brought up some very interesting items with regard to the quality or lack thereof of new pilots in the expanding commercial airline industry. As a member of the Armed Services Committee, that brings up another worry to me. It is rather interesting, I think, that the charts that you have illustrate that airline safety went up from the 1980 to about the 1982 period.

Incidentally, that was about the same time that we did not have the pressures for pilots out of our Armed Forces leaving and going into private aviation. The down side of that is that I expect that there will be some moves to improve that situation. I think that that may lead to a new raid on pilots of the Armed Forces. That is another factor, and it is something that we have to worry about.

Senator Byrd, I don't believe you discussed funding in any great detail. I would simply say, and I am sure that you know, that as far as this subcommittee and our Commerce Committee is concerned, we have always attempted to authorize the full amount requested by the Reagan administration for the FAA.

Now, it seems to me that maybe we haven't done enough in that area. From time to time we have added some money back into supplemental appropriations as requested by the Secretary, most recently after the FAA was cut in March by Gramm, Rudman, Hollings. I suspect maybe we haven't done enough, because when we cut budgets, as we must, we had better look at what we are doing and give some priorities.

I was particularly concerned by something in your testimony. I am going to quote this again, because I think probably this may be the heart and soul of what you are trying to tell us.

> In addition, concern has been expressed that the competitive economic environment established by airline deregulation has created incentives for cost conscious airlines to cut costs and improve profits by cutting aircraft maintenance budgets and maintenance personnel. The growth in the number of airlines and the number of aircraft in the commercial passenger fleet make it difficult for the FAA to ensure that the airlines are conducting proper aircraft maintenance practices.
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> The problem is compounded by the decrease in the number of FAA inspectors to do the job. In fact, in 1986 there are 30 percent fewer FAA inspectors than in 1978. This decrease in the number of inspectors has occurred while the number of air carriers has increased over 100 percent.

Senator Byrd, I think that is a very interesting paragraph. It sums up better than I have been able to sum up and articulates better the problem, the main problem as I see it. Simply, the fact is that maybe because of budget constraints or restraints we are not providing the wherewithal that we should. Some of that falls on this committee. Primarily it falls on the administration, it seems to me, by not recognizing the difficult situation that we have.

In that regard, I would think from your testimony where you very adequately outline the difficulties that we have and suggest that probably one way out of this would be for the FAA to curtail flights, as they did in that period from immediately after 1980. As you noted our air safety went up during that time because we didn't have the air traffic controllers on board, and the number of planes that went into the sky declined. That would be one way of doing it.

Another way of doing it, it seems to me, might be for a significant infusion of additional people into the system. One would offset the other. Is that correct?

Senator BYRD. Well, I hope my testimony carefully reflects that I am not recommending that the FAA do what it did immediately following the PATCO strike in 1981. I am not making that recommendation. The GAO report had indicated that this is an action that might reduce the number of near midair collisions, the surface operational errors, and increase the margin of safety.

It is put in there merely to back up what I feel may be the reasons for this upward direction, the graph's line between the years 1980–82, as being caused by the action in reducing the number of flights immediately following that strike. I don't recommend that that be done again. That is merely put in there for emphasis more than anything else, as far as I am concerned.

But the FAA has suggested this action as a possibility. Now, on the spending side, I am on the Appropriations Committee of the Senate, and the Appropriations Committee has not been niggardly in making appropriations to the FAA. The FAA has not been able to meet its controller hiring goals, even when we provide the money. Now, on paper, sometimes the testimony looks pretty good. But when one asks how many bodies do you really have on board, how many of these positions are filled today—I asked those questions when the FAA Administrator was before the Transportation Appropriations Subcommittee this year, and I pressed that question—they do not have the information available. It seems to me that is all important.

One of the purposes of this Commission would be a need to look into that very aspect, as the distinguished Senator, Mr. Exon, has mentioned, whether or not the FAA indeed has been given the resources—that is one of the purposes of the Commission—and whether or not the FAA has used those resources, if adequate, in an effective way.

It seems to me that would be one of the objectives of the proposed commission.

But the Senator is precisely on target when he says we ought to deal with this question on the basis of priority.

Senator EXON: I thank Senator Byrd and thank you, Madam Chairman. My time is up.

Senator KASSEBAUM. Thank you.

Senator Ford.

Senator FORD. Madam Chairman, I have no questions for Senator Byrd except to say that I compliment him on the apparent detailed research that he has put together, and I am a cosponsor with him on this piece of legislation. I will encourage the Chairman, as I

know the Chairman of the subcommittee will, for the full committee to expedite consideration of this bill.

I do not think any of us are trying to curtail, suppress, or delay anything that FAA is attempting to do. All I think that we are trying to do here is be sure that when we make judgments to assist that agency, that we are making judgments in the best interests of the consumer and our constituents.

I might say, Madam Chairman, that no group of people use the airlines more than those elected officials in the House and the Senate. I am very, very concerned that 48 weekends out of the year when I make those round trips back to God's country, which is near heaven——

Senator BYRD. Watch out there, now.

Senator FORD. God willing, that we will arrive safely and no insurance will be collected by a widow.

Senator KASSEBAUM. Thank you.

Senator Rockefeller.

Senator ROCKEFELLER. Thank you, Madam Chairman.

Senator Byrd, I genuinely compliment you on this I think excellent document. There has been a lot of discussion about the problems of morale, numbers of air controllers, those who do the maintenance work, proliferation of not only major carriers, but commuter carriers. Of course, that affects us very much within West Virginia. But this document of yours, which I think you wisely presented in full to us, brings it all together in a most important way.

I find it stunning, for example, to see the increase over the years in the number of major air carriers and the number of commuters.

The question of competition is interesting, philosophically or economically, in terms of deregulation and the price wars. One could raise the question, have we induced travel through price wars, through competition, which economically makes sense because people can afford and choose to fly, but they are doing so in some sense at their own risk. Can we as Federal officials both, on the one hand, as you say, by having the FAA promote aviation, condoning price wars, encouraging more travel, and allowing more carriers when we know of the retirement which you spoke of, 84 percent of the eligible controllers will exercise their right to retire in the next 2 years. And we have fewer experienced pilots, with fewer hours in the cockpit.

It is a real collision course. We have as a matter of public policy induced that here in the Congress, and I think bear some responsibility with respect to the actions of the FAA.

I think we are facing a very, very real timebomb here, and it is almost ironic that there have not been major accidents this year. And I think you put your finger on the issue of the near-misses. Really, the near-miss is the same as an accident except for the luck factor. Luck is not a very steady partner. It is not a reliable partner.

So we have a timebomb. We have inexperienced pilots. We have many experienced pilots, but not sufficient numbers of experienced pilots. And then the FAA posture, and the FAA, of course, if they dismiss reports, are they doing that because that is part of their job, because if they were to agree to GAO reports, they were to

agree that there were problems, that this in fact would then lower morale even to a greater extent.

I am really struck by the confluence or the contest of figures, so to speak, within your testimony and on this Aviation Subcommittee so ably chaired by Senator Kassebaum. You and I—we fight hard for commuter airlines in West Virginia. We cannot survive without commuter airlines. The majors took off and left West Virginia within months, weeks even, of the enactment of airline deregulation. So we need commuter airlines. But we need them safely, and we need them well flown. We do not need pilot turnover at the rate that we are getting it.

So I think we have a very delicate task before us. I am quite sure that it involves money. And I am certainly sure that it involves a very, very careful questioning of the Federal Aviation Administration's policies, as I have suggested in the past—this matter of recall of the 1981-fired PATCO pilots, if indeed they are still interested. When an individual gets in the car, an individually fundamentally accepts the responsibility for what happens in that car ride, and the Federal Government is involved with respect to the speed limits that Senator Exon talks about, but also the nature of the highway, and that is State and Federal.

But this is quite a different matter. When an individual American is either induced by price wars or whatever to get onto an airplane and fly, he is really in our care, and I think that you have brought some very dangerous statistical and real timebomb factors together for us in a most useful way, and I congratulate you on doing that.

Senator BYRD. Thank you.

Senator ROCKEFELLER. Thank you, Madam Chairman.

Senator KASSEBAUM. Certainly, Senator Byrd, I think you have done a very thorough job in analyzing the many aspects of the issue of safety affecting aviation.

I would like to ask a couple of questions regarding the commission. I know that you have tried to avoid bias in the members of the Commission, and thus have provided in S. 2417 that members should not have any aviation background, but it seems to be universally believed that some members should have some aviation background, experience and knowledge, if they are really to contribute meaningfully.

Would you be willing to give some thought, perhaps, to reconsidering how we could define some of the expertise the Commission could or should have?

Senator BYRD. Yes. What I am attempting to do here, and those others who are cosponsoring the legislation—I think we all have the same basic idea in mind—is see that the Commission be made up of persons who can be thoroughly objective, but of course, who are knowledgeable to the extent that they can be most effective a member of the Commission.

What I am seeking to do here is to be sure that they do not have connections with the aviation industry, and that they do not have connections as having been former members, for example, of the FAA itself. It is an attempt to assure objectivity, but at the same time we must also ensure effectiveness.

Senator KASSEBAUM. Have you detected any support on the House side for the idea of a commission? Have you explored it with anybody over on the House side?

Senator BYRD. Well, I have not discussed this with Congressman Mineta or his staff, but I think it is a good idea, and certainly this will be done. There is very considerable support outside the Congress for this proposed legislation. I would be happy to submit to the subcommittee some of the associations and organizations that are supportive of this legislation.

Senator KASSEBAUM. I know that is true, and I think with the number of cosponsors that you have already, it indicates support here as well, even from some like myself who have questioned whether we need any more independent commissions. We are, after all, here to exercise oversight responsibility. But I think there are those occasions, and this may well be one, where an outsider's view can be helpful.

I would just like to close with a comment on the statistics and the charts that you have here because these have been questions that we have raised before, and I think that they cause a great deal of concern.

I would like to ask what your thoughts are on the fact that it has only been in the last several years that the FAA has been really zealous in keeping records on near-misses and runway incursions. Perhaps the statistics or these incidents are increasing dramatically in number because of better recordkeeping. It is widely believed, I think, that that has had a major impact on the numbers.

Senator BYRD. Well, Madam Chairman, that is the response that we get on the Appropriations Subcommittee on Transportation, when Chairman Andrews and Ranking Member Chiles and I and other members of the committee have pressed Mr. Engen and others on these matters, and the response is that, the fact that the number of surface operational errors, for example, runway incursions, the number of near misses, the number of near midair collisions are up, is in large part because we have more efficient reporting procedures now.

In the first place, I think we need a commission to go behind that. We need to determine what the facts are. That is pure guesswork, really. That is what it amounts to, that such may be a large part of the reason. Whatever the reason, if it is better reporting as against less good reporting earlier, then we ought to know what are the facts. Even with better reporting, it is not something that we can take consolation in.

Let me look at this just for a moment from the standpoint of John Q. Citizen who rides the airplanes from the District of Columbia to West Virginia and back. My colleague, the distinguished former Governor of West Virginia, Senator Rockefeller, has said something about the way that the major airlines pulled out after deregulation. I voted for deregulation. My then senior colleague, Senator Randolph, who had been with the airlines industry for many years, voted against it. He was a small vote among the nine, I believe, who voted against that.

Well, I have been kicking myself, Robert C. Byrd, ever since. Why? For a number of reasons. One, the major airlines began moving out almost immediately. They did not even give us a good-

bye kiss. They just left. They pulled out. So air service went down. What happened to the rates? The rates skyrocketed. And it is with considerable chagrin that I read about these cutrate fares that enable one to go from New York City or Washington, DC, to Los Angeles or other points in California or in the Caribbean for $98 or for a round trip of $240 or whatever it may be. They are making that up on the small, rural routes in this country. We in West Virginia are helping to pay for those cutrate fares, and we are not getting the service that we used to get.

We are very proud of Piedmont, which renders very good service in and out of West Virginia. We do not have enough of it. But the fares are quadrupled to what they were before deregulation. So we are paying for that.

I do not see much said about that in any of the testimony, any of the reports or the surveys that I have read in preparation for this hearing, very little said about the cost that is being placed upon these people who have to depend upon airline service between Washington, DC, and Charleston, WV, or Louisville, KY, or whatever it is.

Third, let me say that I have seen the Administrator, Mr. Engen, appear on TV, and I said this to him when he was before the Appropriations Subcommittee: I think he is doing a good job. I think he is dedicated; there is no question in my mind about that, no question. And I think he believes what he is saying. But as one who used to fear flying very much in the old days when I first came to Washington 34 years ago and for several years subsequent to that point, I would drive 8, 10, or 12 hours or whatever it might be to West Virginia, and drive back.

And then I became quite casual and fearless, I would even go so far as to say, almost, in flying, and I had no problem in riding with the airlines because I learned more about the safety measures and about the excellent equipment and the landing systems and the radar and all that. So I became pretty much self-assured that I did not have much to worry about.

Then I became scared again, and I am scared now. I am afraid. And when I see the Administrator appear on television and saying that all is well, we are doing a great job, the margin of safety is increasing, I just do not believe it. I do not believe it. And I think that there are many of the average citizens out there like myself who feel as I do, we are afraid. And when we read about a bolt being left off here, or a screw being loose there, or a plane landing with only 30 seconds or 60 seconds of fuel left, or a door dropping off, or an engine dropping off, or an inspector or others we read about maybe who are not doing their job, or the low numbers of inspectors, there are two few inspectors, I cannot be reassured by these soothing comments on television that everything is better than ever. I just do not believe it. I do not believe it.

And as Sentor Ford said a moment ago, we all ride the airlines a great deal, and Sir Isaac Newton, when he got hit on the head with that apple, he said something about the law of gravity, and it is the same for all of us, whether we are Senators or farmers or welders or butchers or whatever, Democrats or Republicans, we all fall at the same speed.

And I am afraid, I am afraid, and I think that the public needs to be reassured. We need to know what the facts are. And that is the wherewithal behind the bill that has been introduced.

Finally, in answer to your question, Madam Chairman, it is certainly possible, as I have indicated, that better reporting accounts for some of the increases, but that is not a source of comfort, as I have already indicated. If the FAA is reporting more incidents because of improvements in reporting, then that suggests that the FAA had been underreporting earlier. And in any event, it does not give us room for relaxing in this matter. And I do not want to sound too critical of the FAA. I think there are a lot of good people there, a lot of good controllers, a lot of good inspectors, and people who try to do a good job. But this commission can certainly tell us whether or not the resources have been adequate and whether or not they have been effectively used.

Thank you.

Senator KASSEBAUM. Thank you very much, Senator Byrd. We appreciate your being here this morning to start this hearing.

Senator EXON. I have just one comment before Senator Byrd leaves. I would simply alert Senator Byrd and Senator Rockefeller and the distinguished chairman of the committee that we have another problem, those of us who are have-not States as a result of the airline deregulation that was passed and voted on before this Senator came to Congress.

You remember, one of the selling features for the have-not States were that there was going to be an essential airline service subsidy that was to carry on until 1988. Every effort is being made to eliminate that today ahead of time. I think that this committee should be alerted to that as well as the members of the Appropriations Committee and the Senate and the House as a whole. We have got to stop that. We have got enough problems without eliminating in advance the essential air service subsidy that was placed in there for the very reasons that have been articulated here today by the two Senators from West Virginia.

Senator BYRD. Madam Chairman, the Senator is preeminently correct, and I thank him for his observation.

Senator KASSEBAUM. Thank you very much, Senator.

Senator Lautenberg is with us.

Welcome, Senator. When you were a member of the Commerce Committee—and since you have always maintained a very active interest in transportation issues, and certainly aviation. It is a pleasure to welcome you here this morning, Senator Lautenberg.

STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM NEW JERSEY

Senator LAUTENBERG. Thank you, Madam Chairman.

Though I am not a member of the committee, I do maintain my interest in transportation issues. I serve on the Transportation Subcommittee of the Appropriations Committee, and because of the particular transportation needs of the region I come from, this is a very important issue for me, and I want to compliment you for the leadership you have taken to ensure adequate resources for our Nation's aviation safety system, and I am pleased to see other col-

leagues here and to appear before them, assuming, of course, the interrogation will be forthright, perceptive, and perhaps cruel at times, but I am willing to endure.

The committee is taking testimony today on S. 2417 that was introduced by our distinguished minority leader, Senator Byrd. He has been a real leader in calling the Senate's attention to problems associated with the aviation issues. Now, as you know, S. 2417 sets up a commission to probe fundamental issues which go to the heart of our aviation safety problems.

This legislation calls for an independent and thorough reexamination of the Federal Aviation Administration, its functions and organization. As a cosponsor of this legislation, I urge the committee to move swiftly on this bill and to approve it. If established promptly, the commission can provide the next Congress with recommendations early in the session. If the committee expedites the work of the committee, its recommendations will be available to the Congress during consideration of the Airport and Airways Improvement Act reauthorization.

Madam Chairman, in 1986 we have not had, thank goodness, a major air disaster, but we are only one major crash away from again shaking the public's trust and frightening them terribly. This is not a time to forget that there were 526 fatalities in 1985.

On May 16 of this year, at Chicago's O'Hare Airport, 2 airplanes on the runway came within 20 feet of each other. Had they collided, 224 people were at risk. And that is too close for comfort.

That near miss occurred just 2 days after the National Transportation Safety Board urged that more personnel and training be devoted to ensuring runway safety.

Madam Chairman, 1985 was the worst aviation year since 1977 in terms of fatalities. I am not superstitious about these things, and I do not think it was just a bad year. These accidents are occurring because of overload on our system, overload which must be acknowledged and addressed.

Let me focus on the most immediate and obvious problems we face in assuring safe flying for the public.

First, the FAA simply does not have enough experienced air traffic controllers to keep pace with the growth in air travel. In the fiscal year 1986 supplemental appropriations bill just enacted, the Congress directed the FAA to have 14,480 air traffic controllers at work by October 1. By air traffic controllers, the Appropriations Committee meant just that, not air traffic assistants, not other support personnel, but air traffic controllers. The word controllers has a very real meaning. It means personnel that are properly trained to operate.

The Congress wants controllers who can handle the job, not just bodies to fill a slot on a personnel chart. Inadequacy in the air traffic controller work force has meant enormous stress for those on the job, so much stress that many of them valuable to us in the towers are contemplating early retirement or a change in occupation to avoid the intolerable tension that is now part and parcel of protecting our skies and our air travelers.

With a steady, 5 percent annual increase in air traffic nationally, the effort to rebuild the air traffic control system is moving slower than a snail's pace.

I want the FAA to meet this goal, I truly do, but as a practical matter, I doubt that it will. The shortage of experienced air traffic controllers is now more than a budgetary issue and more than a recruiting problem. To get air traffic controllers on line fast enough to protect the public, we need experience that money just cannot buy.

Therefore, I renew my call for the selective rehiring of air traffic controllers dismissed in 1981, Selective hiring of those fired in 1981 with no displacement of current employees, with no recapture of seniority or other privileges, can help us rebuild our air traffic control system.

We have been debating this issue for a couple of years now, and we get nowhere with it, and when I visit the towers, which I do—I fly a lot in small aircraft, and I visit some of the towers in the smaller airports, and I would tell you, though the air traffic controllers who are operating will say to me, well, Senator, we are doing OK, I see the tension that exists, and I see the concern that exists, and I see the fatigue that is there, and no one can convince me that we ought not to reach into that pool of talent, if it is available, and bring them aboard.

And I am sick and tired—I was a corporate leader before I came here. I managed a company with more than 16,000 employees, bigger than the force that we have in the air controller system, and I was concerned about morale every day. I was in the service business, and morale was the key factor in terms of the management of that complex organization, and it was my responsibility as the leader of that organization to maintain morale, and I did it best by making sure that everybody had the tools to do that job with. That is how I succeeded in maintaining morale in a very successful company.

Second, we need to increase investment in air safety technology. We need the installation of microwave landing systems to enhance the safety and capacity of our airports. Wind shear detection technology is another example. A year ago a Delta Airlines jet crashed on approach to the Dallas-Fort Worth Airport, killing 136 people. That crash involved wind shear. Weather is a major factor in many air disasters, and we must do whatever we can to reduce the threat that bad weather poses.

We are now well into the violent thunderstorm season. Wind shear does not always occur in relation to violent thunderstorms, but it frequently does. At the FAA's request, Martin Marietta generated a list of 100 airports around the country that, on the basis of traffic levels and weather, need wind shear detection technology, but the FAA has not asked for 100 systems. It has asked for 15. At a time when the administration is requesting a 75-percent increase in star wars systems to militarize the skies, it seems to me that we should be able to afford the technology to make sure that our planes do not crash when landing on Earth.

The problem is acute in the New York and New Jersey area. In New York and northern New Jersey, we have three of the world's busiest airports, Kennedy, La Guardia, and Newark. The FAA plans to install one wind shear detection system to serve both JFK and La Guardia. And you will be told by technicians around the country that that is not an efficient way for these systems to oper-

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ate. They ought to be right on the premises in order to do their best job. Newark Airport, one of the largest and fastest growing in the Nation, will get no wind shear protection whatsoever. Yet on the Martin Marietta list, all three of these airports fall within the top 30 in terms of the need for that wind shear detection technology.

This is a case of false economies and misplaced priorities. And the fact is, the funds are there to meet this challenge. They are sitting in the Airport and Airways Trust Fund. The fund is supported by taxes paid by the public to support the aviation system. But these funds are not being used for the purposes for which they were collected. Instead, they are being left to build up in the trust fund, used as paper savings against the deficit.

Increasingly, so-called surpluses in our Transportation Trust Funds, funded by taxes levied on the public, are being used to achieve purported reductions in the deficit. It is happening with the Highway Trust Fund, and it is happening with our Aviation Trust Fund. The public pays these taxes for safe and efficient transportation. It ought to get what it is paying for.

I know, Senator Kassebaum, that you have been a staunch supporter of this principle, and I think we need to insist upon it, that we get what we pay for in these dedicated funds.

Third, we need more vigilant safety inspections and tougher enforcement of FAA safety regulations.

In May, the GAO reported to the Congress that, and here I quote, that "FAA at present cannot say with assurance that airlines are complying with safety regulations." After drastic cutbacks in safety inspectors early in this administration's first term, DOT has been rebuilding its inspector work force, but like the air traffic controller work force, the training and experience of these inspectors is sorely lacking.

If we cannot catch all the cheaters, we can at least impose strong sanctions on those that we do catch. Such sanctions can serve as a deterrent to other airlines which may be tempted to cut corners.

Yet, we have seen the FAA charge Eastern Airlines with 78,000 safety violations, calling for $78 million in fines. Now, Eastern and the FAA are haggling over a small portion of that amount.

The time has come for us to ask some very fundamental questions about the structure and purposes of the FAA. The Congress must ask simply, if the time has come to grant the FAA independent status as an agency chartered solely to protect the public interest in aviation safety. The idea of an independent FAA I think is an attractive one. There are important questions to be answered about whether such an agency should be a Federal corporation or purely an independent agency.

The advantages of an independent FAA are several. Such an agency would be able to take a longer view of the needs for airport capacity and safety improvements. An independent FAA with its own budget, backed by a dedicated trust fund, could more closely adhere to the premise of that trust fund and spend the tax revenues paid by users for the purposes for which they were collected.

An independent FAA could better utilize its personnel and resources where they are most needed without the entanglements now found in the Federal bureaucracy. Independence would give

the FAA more clout with the Office of Management and Budget, an agency increasingly devoid of policy interest, which sacrifices health and safety on the altar of mindless budget cutting.

It would make FAA's mandate clear: public safety. It would free the FAA from bureaucratic policy review within DOT and give FAA a stronger voice within the administration on safety issues.

Madam Chairman, a freestanding, independent Federal Aviation Administration has a lot to recommend it. If no progress is made on our aviation safety problems, the Congress should take a serious look at this proposal in the context of the reauthorization of the Airport and Airways Improvement Act for next year.

I thank you very much for this opportunity to appear before you.

Senator KASSEBAUM. Thank you, Senator Lautenberg.

I would like to ask. Whether you believe that airline deregulation has had an adverse impact on aviation safety?

Senator LAUTENBERG. Well, the question is a little bit complicated. I think that deregulation has certainly in many cases improved the volume of air traffic, has made transportation heretofore unavailable readily available for lots of people. Air transportation, in my view, has become virtually mass transit. We have people flying who never flew before who can do so because the fares are economical and the service is readily available in many places, though I agree with both my colleagues from Nebraska and from West Virginia that service that is essential for those communities that are more remote has just been virtually done away with. The economic basis is not there.

As a result of that, Madam Chairman, the volume of traffic, the number of flights, the number of take-offs and landings has increased incredibly, and if you want to say has deregulation in effect caused some of that? Yes, but I do not think deregulation is a bad idea. I think deregulation for the most part is a very good idea. That is why we have these airlines offering modest fares.

But if you are going to increase the traffic, if you are going to say there is a more competitive world out there, you have got to make sure that competition does not take shortcuts with air safety, nor by cutting down on essential service—that is another question, but I think it is one that has to be reviewed—and does it create more problems for FAA? Absolutely. But the problems are the kinds of problems that we as a Nation ought to want, more travel, more commerce, more activity, more vacations. That is good for our country.

And we just ought to step up to the needs and take care of them.

Senator KASSEBAUM. Thank you very much.

Senator Exon.

Senator EXON. Senator Lautenberg, thank you very much for your most interesting testimony, right on point, and most of it I agree with.

I would just enter, though, as a matter of explanation one point, deregulation in Nebraska has been extremely good for Omaha. There are more flights, the airport has been expanded. Omaha has become more of a major terminal in our area, maybe not major compared with New Jersey and New York, but major in our area. But out-State Nebraska has been devastated by deregulation, especially on point.

I certainly agree with you that we have got to do something to improve not only the air traffic controllers numbers in those towers, but equally important, I think, the inspection services, to make sure that maintenance, and that corners are not being cut by these ever-increasing competitive situations between the airlines.

Thank you for bringing this to our attention. I think we have to do something. We have been told time and time again here in this committee, and before other committees and subcommittees of the Congress, that we can maintain adequate safety without being forced to hire back those who saw fit to strike, have an illegal strike. But I am becoming more and more convinced that while those predictions and aspirations and goals were well thought out, I am wondering whether or not we should not have some prescription, not unlike the one that you have suggested. If traffic safety is the major concern that I think it is by the members of this subcommittee, and as particularly evidenced by the charts that were presented by Senator Byrd this morning, I am becoming more and more of the opinion that unless we do something dramatic to get more qualified, and full performance level controllers in the towers, not only today but in the years to come, we may have to do something such as you have suggested.

I thank you for bringing it up once again. I have no questions.

Senator KASSEBAUM. Senator Kasten.

Senator KASTEN. Madam Chairman, thank you.

I have no questions. I have a statement that I would like to make, but I do not want to delay the Senator. So what I will do is make my statement at an appropriate time later. I would simply thank the Senator for his testimony, and I agree with the thrust of his comments.

Senator KASSEBAUM. Senator Rockefeller.

Senator ROCKEFELLER. Just a short, Madam Chairman.

Senator, you indicated that airline deregulation is a good thing because it is allowing people to fly that have not had the opportunity to do so before. I agree with you, that is great.

There is a comparable philosophy, or maybe it is not comparable, and I would ask your view on this—we have something called the Food and Drug Administration, as you know. Vaccines are good for people. In fact, vaccines are very good for people. But there is sort of an unwritten, or written public policy rule that we do not administer vaccines, even as good as they are until we are sure that they are safe. And only at that point do we administer vaccines.

Now, I am not sure how many people it is who die from or who did die recently from vaccines that were not administered because they were still in development. I will not extend my point too far, but there is a comparison.

I agree that people should be able to fly. And I think it is very important that people should be able to get to and from Newark, Kennedy, and Los Angeles rapidly. But that they should do so safely is peculiarly in our charge.

It is one thing to say that the airlines—it is a commercial matter, that the airlines do that. But it is a commercial matter very much within the charge of us as Senators. From my point of view it is difficult to say with the number of near misses which you have referred to in your testimony—not just the accidents—there

have not been deaths in this year so far, thank God. But the accidents and the near misses I look upon as close to that, again because luck is not a constant companion or a reliable companion.

I wonder whether we should be allowing the current growth in the volume of airlines—the proliferation, the numbers of flights and the numbers of airlines and the numbers of computers when, on the one hand, because of budget deficits, with or without Gramm-Rudman, we are giving FAA about what they request. But do they request on the basis of realism or do they request on the basis of real need? If it is not on the basis of real need, are we acting in the public interest by allowing this proliferation?

I agree that it is great that people should be able to fly. Yet, I also believe that it is good that people cannot get vaccines until we know that it is safe to administer those vaccines.

Do you think I stretch a point?

Senator LAUTENBERG. I want to argue the other side with my good friend and colleague from West Virginia. Of course, there are sometimes accidents as a result of perhaps either premature or insufficient testing of a new product. You often get into the question of whether or not you save multiples of lives, perhaps numbering in the millions, for an occasional poor reaction to a drug or a vaccine, and I dare say that parents, given that choice, would probably say, well, if there is a chance of 1 in 3 million that my child is going to get sick if I give her this, on the other hand, I can make sure that she will not wind up with polio or something of that nature.

I think that is the kind of a chance that lots of people take. And I do not want to analogize that except to say, Senator, that the one thing you are absolutely on the target with is that it is our responsibility to the best of our ability to protect the health and well being of our citizens, whether that goes from the military to the aviation business.

Now, the deregulation opportunity has been a very good one. We just have not stepped up to our responsibility as a nation, as a government, to make sure that people who trust us are being given the best product. We can handle, in my view, a hell of a lot more air traffic more efficiently if we have the population in the towers, if we have the safety inspectors, if we have the appropriate equipment, radar included. And Admiral Engen is here, and I am sure he will agree. If we step up to the task, we can do more.

You cannot fit 70,000 people in a 50,000 seat stadium and give each one a seat, no matter how hard you try.

We have the delays. You know, we are talking here about the safety issues. No one has really ever estimated the cost to the Nation in terms of lost time, lost efficiency, lost money. I was at an airport, small airport the other day, when we sat for 3 hours, and I watched huge jets burning fuel for an hour that time, just burning it, going nowhere. Why? Because the New York area was apparently saturated. I do not know whether it was weather or what it was, but I want to find out because every time that I take a short flight from Newark to Washington or vice versa—and that is about 100 times a year, all told—there are delays in the clearest of skies. There are the same delays when it is raining.

Now, I know weather causes extra problems. I cannot understand why it is that sometimes we wait 2 hours on a clear day to fly 45 minutes. That to me is a question that has yet to be answered.

So it is a question of our national economy, our regional opportunities. Why are we not able to get into this problem and say yes, we will commit the resources.

And Senator Rockefeller, you hit one button right on the head, and that is when an agency within Government decides that it is going to function as an agency with the portfolio mission it is given as opposed to an extension of OMB, I think we are going to be better off, and permit us who have the responsibility to make the decisions on whether or not that budget ought to be funded.

I am sick and tired, Madam Chairman, of having agency after agency come before me, plead their case based on sparse resources, and try to persuade us, Members of the Senate, that it is OK, whether it is in housing or air safety or other things. I do not think that is a way to do business. It is our decision to make.

Senator KASSEBAUM. Thank you very much, Senator Lautenberg. We very much appreciate your being with us and your fine testimony.

I know that Senator Kasten is juggling a couple of committee responsibilities. Would you like to make your statement now?

OPENING STATEMENT BY SENATOR KASTEN

Senator KASTEN. Thank you, Madam Chairman, very much.

I first of all want to thank you for allowing me this opportunity to participate in this important hearing this morning. I commend you for conducting this hearing on aviation safety. I am not a member of the subcommittee. I am, however, a member of the full committee, but more importantly, I am here as a cosponsor of S. 2417.

Madam Chairman, I am very concerned about the lack of experienced personnel working to ensure aviation safety, especially in the light of the growth of air travel. In one critical area, the GAO, the General Accounting Office, has pointed to the severe drop of air safety inspectors. By 1988, the FAA plans to have 1,898 inspectors. That is an increase of 292 from today's level. Yet even that increase will not return us to the numbers that we had in 1978 when deregulation began. In fact, these increased numbers would represent a 5-percent reduction from the first year of deregulation, 1978.

But if you look at what has happened on the other side of the ledger, between 1978–88, the FAA expects to see a 63-percent increase in the number of passengers flying and more than a 300-percent increase in the number of operating airlines in the 10 years since deregulation. I think that is particularly important, a 300-percent increase in the number of operating airlines in the 10 years since deregulation, since 1978.

Now, that is wrong. It does not make sense that we see fewer inspectors and more passengers, and particularly more operating airlines.

Making matters worse is the fact that the FAA has no criteria right now on which to base the inspections that it is able to do with

its limited staff. There are no guidelines for which airlines to inspect, and no timetables for when to inspect. And I believe that that is one of the reasons why this committee should support, Madam Chairman, your legislation, because the commission could deal with questions such as the qustions of guidelines, schedules, and timetables.

The GAO has also found that the FAA has not kept detailed records of whom they have inspected, or more importantly, why they have inspected. Instead, their approach to inspections has meant that some airlines have gone through many inspections during the course of a year, and then there are a whole other group of airlines, some airlines have not been inspected at all.

Clearly, the FAA's workload has significantly increased since deregulation began. I do not think there could be any question of that.

I believe that we must push beyond the goal of 1,898 inspectors by 1988. We should at least maintain the ratio of inspectors to large aircraft that we had in 1978 when deregulation began. The number of aircraft has increased 15 percent since then. I believe that FAA inspectors should at least keep pace. That would mean that at least 700 new inspectors by 1988 would be provided rather than roughly 300, which is the increase that they are talking about now.

I would call upon the FAA to submit a proposal outlining how that goal could be accomplished over the next 3 years. I believe that any additional costs are well justified in terms of the safety factors involved, and I think that that has come up in the testimony here today, and I believe we will hear that in continued testimony.

A member of the Senate Transportation Appropriations Subcommittee, I am going to be working to seek additional funding targeted specifically for FAA inspector training. I know that the chairman of the Appropriations Subcommittee is already planning to seek additional funding, and we ought to make sure that the hiring of new inspectors gets top priority.

It is ironic that while the FAA is charged with the responsibility of maintaining and enforcing standards of safety, the FAA also has the responsibility of promoting aviation as a whole. My fear is that all too often the FAA glosses over its shortcomings to paint a rosy picture of air safety in the interest of promoting aviation.

The time has come for the FAA to concentrate on increasing the margins of safety and leaving the promotion up to the airline industry. Increasing the number of inspectors and inspections I believe is a major step in that direction.

So I once again want to thank you. I am pleased to be able to be here today, especially as we consider the Aviation Safety Commission Act. I am pleased, as I said, to be a cosponsor. I would hope that the Commission report can help not only to increase awareness of the existing problems, but also to improve the overall quality and the staff and the safety of our air transportation system.

Thank you.

Senator KASSEBAUM. Thank you, Senator Kasten. We appreciate your being here to assist us as much as you can with the hearing.

I would like to call now the first panel up to the witness table.

I would urge witnesses, if I may to summarize their testimony. It perhaps does not seem fair since we do not limit ourselves, but your full statements will be a part of the record. Otherwise I might have to change my observation that we might be here until 10 o'clock.

It is a great pleasure to welcome Hon. Patricia Goldman, who is the Acting Chairman of the National Transportaton Safety Board. And also Mr. Herbert McLure, who is the Associate Director at the General Accounting Office.

Ms. Goldman, would you proceed first?

STATEMENTS OF HON. PATRICIA GOLDMAN, ACTING CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD; AND HERBERT R. McLURE, ASSOCIATE DIRECTOR, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, GENERAL ACCOUNTING OFFICE

Ms. GOLDMAN. Thank you, Senator, and I will try and limit my remarks. You have the prepared text for the record.

I am pleased to be here to comment on the bill which you have to establish an independent Aviation Safety Commission. There has been a lot of discussion today about margins of safety and statistics, so let me talk about that and then quickly make a couple of comments about the bill.

It has been commonplace, and we have heard more of it here today, obviously, to attribute either the decline or the increase in aviation safety to the effects of deregulation. I was intrigued by the statistics which Senator Byrd brought forward today, and I am going to be eager to take a look at them because I am a little bit confused by those statistics in terms of the margins.

The case in terms of whether safety has been affected depends on, as usual with statistics—and perhaps I am a little skeptical of them, having been trained as an economist originally and somewhat wary—we can make a case depending on which year you look at, as my testimony indicates, that it has increased or decreased.

I have never quite seen margins of safety measured that way before. It is frequently in anecdotal fashion. If I understand those statistics, they only relate to either runway incursions or near misses. That does not take into account, obviously, other things that have affected aviation safety very much this year that we have discussed with this committee before—problems of aging aircraft, the inspections, which you did talk about, a loss of a hydraulic system or reverse thruster not working—all of those could be attributed, as they have been sometimes, to changes in maintenance practices, et cetera.

But I think to look at those statistics, we have to take a more careful look at that because I have not found personally that there really is a statistical correlation that you can make.

I have to say, since this committee also works on all forms of transportation—Senator Rockefeller is not here at the moment, but since he was talking about protecting the health and well-being of the American traveling public as he talked about on the highways as well—I would point out that every day the number of people

killed on the highway would equate to one Delta 191 accident every day. So I think we need to get some sense of perspective.

There is no doubt that deregulation has had a very destabilizing effect, and that is what your bill seeks to take a look at in terms of the FAA situation and the number of inspectors. What it seems to me—and we have spoken before—is that deregulation has resulted really in a major change in the operating environment, and what this bill is looking at is to see how that operating environment is faring. It seems to me that in the passage of deregulation there were not perhaps adequate plans made for what changes would take place.

For example, one of the things that was talked about was the experience of pilots. It is something that has been of great concern to us. We have taken a look at it in a couple of accident investigations we have been handling this year. We will be bringing up the case of the Henson Airways that was referred to before, Bar Harbor and Alpena.

In fact, I would like to make clear there has been a change in the experience levels of the pilots. There has not been a lowering of the standards. In fact, the standards for the number of hours that a pilot must have are the same as they were before deregulation. What has changed is, although they are still exceeding those standards, they are doing so by less margin. Therefore we may need to take a look at the standards. Although there has been a deregulation on the economic side, there has been no change in those regulations on the safety side.

Perhaps we need to take a look at those regulations. And it is my understanding, for example, that FAA now has a project in the works to take a look at those standards. But I would urge you that we may need to take a look at the standards and change those which may be some of the things that the proposed legislation would stimulate.

As to the provisions of S. 2417, at the outset I would note that it is composed of seven members appointed by the President who "possess extensive experience and expertise in the highest executive levels of corporate management." Senator Kassebaum has raised one point that I am concerned about, and it may be ironic in view of the longstanding debate with this committee over the number of technically qualified people who are needed for the Safety Board. But I must say that we at the Safety Board are concerned that the qualifications proposed by the legislation excludes having people who have experience in the aviation industry. I think perhaps as the Safety Board has found, to work quite well, it would probably be helpful to have people who have some experience mixed with those who have perhaps a less biased view, if you will. I am saying they are all going to be biased by being from the industry, but we think it would be very helpful if you take a critical look at perhaps including some people from the aviation industry.

One of the things that helps us, of course, is that we have a large staff that comes with that background to help and supplement the areas where we are lacking, but we think that is an area that needs attention. The other thing that concerns us is the discussion that the recommendations of the Safety Board be made mandatory.

I have taken my own survey of the Safety Board membership, and we are unanimously agreed that we think to make our recommendations mandatory would be detrimental to us.

That puts us in a position of having a great stake in investigations later if something was predicated on recommendations that we made, and then it turns out to be incorrect. As you know, the agencies and the private groups are given a time to come back to us and propose alternate action. We have found that many times the alternate action proposed by the people who are subject to our recommendations are better than some of the ideas we have.

We don't have a lock on the best ideas, although we think that many of our recommendations are good and many of them stay that way. We have found that the alternate recommendations are many times at least as good as what we have proposed, and so we would urge that if the legislation goes forward, that the recommendations not be made mandatory upon the recipients of them.

With that, I would be happy to respond to questions after Mr. McLure proceeds.

[The statement follows:]

STATEMENT OF PATRICIA A. GOLDMAN, ACTING CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD

Madam Chairman, Members of the Committee, I am pleased to be with you this morning on behalf of the National Transportation Safety Board. You have requested that I comment on S. 2417, a bill to establish an independent aviation safety commission to study the organization and functions of the Federal Aviation Admistration (FAA). This proposal and your timely discussion of it provides an excellent forum for an objective look at aviation safety, and I appreciate this opportunity to contribute to your deliberations.

As you know, two studies have been within the past year on related topics—one by the Airline Transport Association (ATA) which recommends that the Air Traffic Control (ATC) functions and activities be taken over by a federal corporation, and the other a follow-up to that study contracted to the National Academy of Public Administration (NAPA) by the ATA. The latter study examines the value and feasibility of an overall government corporation as an alternative to the FAA, with particular emphasis and focus on the Air Traffic Control system. It concludes that a government corporation would offer substatial advantages over the current FAA and offers several alternative options on how to organize the proposed entity.

The Safety Board has not taken a position on these proposals, but their publication has resulted in some constructive dialogue. All of us with concern and responsibility for aviation safety are taking a closer look at the FAA's functions and capabilities with a common goal—the reality of an FAA with the appropriate charter and sufficient resources to maintain aviation safety. Whether this is accomplished by the agency as currently established or another entity, this goal must be paramount.

Before commenting on some of the specific provisions in the bill, I would like to comment generally, as you requested, on the subject of aviation safety as it relates (or does not relate) to deregulation of the airlines.

It has become commonplace in the past few years to attribute the decline or increase in aviation safety—whichever way the statistics are interpreted—to the effects of deregulation. But like any statistical game, the figures can be manipulated to draw any number of conclusions. For instance, if 1985 is cited as a sample year, doomsayers can claim that its record as the worst year in commercial aviation history in terms of fatalities is but a harbinger of things to come. The opposite prediction can be made by looking at the statistics for 1984, which was one of the safest years in recent history. Both years followed the implementation of deregulation. Which one best describes its effects on safety—if any?

The fact is, there is no statistical correlation between economic deregulation and safety. Further, I think we need to go beyond statistics which, after all, are an indication of where we have been rather than where we are going.

What is more significant, although subjective, is the "margin of safety." There are many in and outside the aviation field who believe that this margin of safety has

narrowed since deregulation. This assessment is based on such factors as increased aircraft being handled by fewer and less experienced controllers; more aircraft being surveilled by the same or fewer FAA inspectors; less experienced pilots.

But how critical are these factors in the face of increased technological assistance to the controllers, better and more reliable aircraft and improved and more reliable maintenance reviews available to FAA inspectors? Some would say not at all.

What this suggests to me is that the aviation system—now more then ever—requires close and tough scrutiny by all those responsible for ensuring its safety. In that regard I am pleased to note the special emphasis Secretary Dole and Administrator Engen are putting on airline inspection. I would not hesitate to say that the U.S. aviation system is still a safe one—the safest in the world.

Deregulation, to be sure, has had a destabilizing effect. But I would make the point that this is more a result of poor or incomplete planning than an inevitable outcome of economic deregulation.

For example, predictably, it resulted in many new entrants into the system as well as considerable expansion among the existing carriers. And yet, at about the same time it was implemented, the number of FAA airline inspectors decreased—and not until recently has that force begun to build up again.

The problem isn't confined to just numbers, however. As new airlines start up, FAA inspectors not only have a dramatic increase in regular oversight responsibilities, but they have an increased burden in the review of the start up of such airlines. And many existing airlines have grown several fold with a commensurate increase in the need for inspection and oversight. Thus, inspector training and experience must be geared to a constantly changing environment.

Deregulation has resulted in a major change in the operating environment, and it has had the effect of upheaval in the industry including bankruptcies, mergers, and new acquisitions. Thus it is encumbent on all of us in the aviation community—the FAA, the industry, the NTSB, the Congress—to intensify our vigilance.

And this objective, undoubtedly, is what prompted this hearing and the legislation before this Committee. Which brings me to the provisions of S. 2417.

At the outset, I note that the proposed Aviation Safety Commission shall be composed of seven members appointed by the President who "possess extensive experience and expertise at the highest executive levels of corporate management." In view of a longstanding debate with this Committee over the need for technically qualified members on the Safety Board, it is with some irony that I suggest that you may want to consider requiring an aviation background for at least some of the commission members.

Let me hasten to point out the distinctions between the Safety Board and the proposed commission. The former is composed of a fully technical staff whose function is to provide the Board with its expert conclusions and recommendations, which the Board uses as a basis for its determinations. The proposed commission, however, would be composed of members who are not required to have technical expertise—in fact, they are proscribed from aviation industry involvement. Thus, they would be tasked with sorting out technical information of which they may have little or no knowledge.

In view of the apparent intent of the bill—an assessment of the FAA's capabilities to carry out its mandated functions efficiently and effectively—the commission, lacking aviation expertise, could well be led astray. This is an area the Committee might wish to review in some more detail.

With regard to the functions the commission is to perform, S. 2417 focuses on topics of discussion within the aviation industry that have been in the forefront of debate for some time, notably the conflict regarding separation of the FAA's dual responsibilities of promoting commercial aviation and ensuring aviation safety, as well as reorganization of the FAA as an independent agency. While the Board has not taken a position on these proposals, we would be pleased to participate in the commission's review.

I would like to focus particular attention on the provision in the bill having to do with making mandatory certain or all safety recommendations issued by the NTSB.

This may not be the reaction you expected, but my own survey of the Safety Board membership reveals unanimous agreement that such a proposal would have a detrimental effect on the Board's effectiveness. Specifically, we believe that making our recommendations mandatory could have the effect of limiting the Board's objectivity in accident investigation in that our determinations of probable cause no longer would be made devoid of self-interest.

Furthermore, we believe that if we can't convince people to adopt a recommendation on its merit, then perhaps the recommendation isn't appropriate. There is a

need to allow the affected agencies to have alternative solutions, based on management needs and objectives of which we may be unaware.

Madam Chairman, I have no other comments on this proposed legislation, other than to thank you again for this opportunity to participate in your hearings. I would be pleased to respond to any questions you may have.

Senator KASSEBAUM. Thank you very much.

Mr. McLure.

Mr. MCLURE. Thank you.

A great deal of our work has already been discussed this morning. I would, however, like to summarize and show some linkages to what we have done over the past year. You may remember that last October we testified before this subcommittee concerning our review of the conditions within the air traffic controller work force and variations in the type and frequency of FAA's air carrier inspections.

Since that time we have concluded that the growth in the air traffic is straining the controller work force in many major facilities. We have also testified on several occasions that because of the problems within its airline inspection program, FAA doesn't know all it should about whether airlines are complying with Federal safety regulations, and we are just beginning now to review various airway system specialist staffing issues.

As we reported in March, controllers feel overworked and anticipate that the situation could eventually impair their ability to maintain an adequate margin of safety. FAA data on staffing, overtime use, and air traffic activities support the controller's contention that the work load has grown to a level where they are being stretched too thin. Our consultant, the Flight Safety Foundation, compared the conditions we found with the results of a study it did for FAA in 1981, concluding that conditions within the controller work force have worsened in the past 5 years and that air traffic control system safety has been diminished since the 1981 controller strike.

Recognizing that FAA will need years to increase its complement of qualified controllers, an average of 4 years at the present rate of gain at the centers, and even longer to provide new equipment and measures to reduce the controller workload, we recommended that FAA restrict air traffic where controllers are overworked until the agency could meet its staffing goals.

Our report includes several other recommendations of actions FAA might take to reduce workload pressures on controllers and to improve the quality of its reporting to the Congress on the overtime being worked by controllers and controller staffing progress. In a response to our report that was just released yesterday, the Secretary of Transportation generally agreed that FAA needs to increase staffing and reduce overtime, particularly at its en route centers.

Using the facility-specific information developed during our survey, the Department has also agreed to take additional action where it believes this is warranted, and to review the agency's traffic management programs with an eye toward expediting as much as possible planned system enhancements. With the availability of facility specific information developed during our survey, we look to FAA to take further action commensurate with our findings.

This might include evaluating the effectiveness of its traffic management system at centers where controllers and supervisors identified inadequate flow control procedures as a reason for their being required to deal with more traffic than they felt comfortable with. FAA is also in the process of increasing the size of its inspector work force, and they are taking other actions to respond to recognized problems inherent in the inspection program.

Recent FAA studies as well as those conducted by the Office of the Secretary of Transportation, the Department's Office of Inspector General, and by us show that FAA's airline inspection and followup activities are often insufficient to identify major safety problems or to ensure that problems are corrected once they are identified.

For example, in 1985, FAA's own safety activity functional evaluation—Project SAFE is what they call it—found that FAA surveillance of airlines was often ineffective, and that broad changes in FAA's inspection program were needed to improve aviation safety. Moreover, several recent NTSB investigations criticized FAA's inspection program and concluded that ineffective FAA inspections contribute to aircraft accidents.

FAA is aware of these problems, and under the leadership of Admiral Engen and Tony Broderick, they have begun to respond. In addition to increasing the size of the inspector work force, FAA has issued staffing standards and national guidelines which set forth minimum numbers of inspections and has affirmed that inspections, not certifications of potential new airlines, are the inspector's No. 1 priority.

FAA has also instituted a national inspection plan using large specially assembled teams to inspect targeted airlines. Meanwhile, though, FAA's examination of these problems and the available options for facing them is going to take a while, years to be completed. Meanwhile, FAA needs an effective plan for dealing with its shorter term problem of ensuring airline compliance with safety regulations now.

Our review suggests several steps that FAA needs to take to address these short-term problems. These include revising its nationwide minimum standards for the type and frequency of airline inspections to help inspectors target airlines displaying characteristics that indicate possible safety deficiencies, things like a relatively large amount of contract maintenance or training, inadequate internal management controls or management experience and philosophy that seems incompatible with sound safety practices.

They are also identifying—we also think they should try to identify who is inspecting which airlines, and how frequently, so they can better allocate their existing inspector work force, and to plan additional people. We think they should ensure that inspectors have the training and experience necessary to carry out their assigned duties, and to sequence the actions to upgrade the inspection programs in the most logical way.

At hearings before the House Subcommittee on Aviation in May, the FAA agreed to revise its guidance to inspectors to provide them criteria based on airline characteristics that affect safety compliance so that inspectors have a more consistent basis for determining the minimum necessary number and mix of inspections.

Unfortunately, increases in FAA's controller and inspector work forces may wind up adversely affecting the staffing levels of other FAA personnel, especially airway systems specialists who maintain radar and computers that FAA uses to control aircraft. FAA must increase the number of controllers and inspectors in fiscal year 1986 within FAA's authorized full-time equivalent staffing ceiling. While some of the increases can be accomplished by transferring qualified controllers out of overhead positions, and inspectors, the remaining increases may have to be offset by decreases in the ceilings for other FAA employees.

The airway system specialists are the only other sizable work force the FAA has. At the request of the chairman of the House Subcommittee on Aviation, we have begun to examine this and other issues related to the adquacy of FAA airway system specialist staffing, and we plan to report on that next spring.

Our work has also identified instances where FAA has had difficulty balancing its dual responsibility for promoting commercial aviation and assuring aviation safety, and these roles may themselves well entail at least some measure of conflict. For example, FAA did not respond effectively to changes deregulation brought about in the airline industry, and that has been mentioned several times this morning.

It did not officially recognize that a fiercely competitive deregulated environment highlights aircraft maintenance and other safety related activities as controllable expenses that can directly affect an airline's financial health, a situation that requires greater oversight. The airline inspection program is probably a good example of FAA's slowness in responding to these changing needs.

We found that after deregulation, FAA headquarters allowed their field managers to decide how best to use the inspectors they had without providing particular guidance, and the local managers for the most part assigned priority to certifying new and expanding airlines, because there were so many of them and they wanted to get into business. So, they emphasized that rather than inspecting the compliance of airlines that already existed.

In five district offices that we included in our review, inspectors estimated they spent about 80 percent of their time on certification and investigations, leaving only about 20 percent of their time for inspecting airlines. They attributed this priority to industry pressure on FAA to certify new airlines and approve changes to existing ones. FAA has recently affirmed, however, that inspections remain as top priority.

Our work also identified instances where FAA found substantial resources to quickly recertify airlines after taking months to revoke their operating certificates for safety reasons. For instance, after noting serious safety deficiencies in May 1984, concerning an airline's operations, it took 6 months for FAA to revoke the certificate. One day after the certificate was revoked, the airline filed for a new one. FAA responded 1 month later by sending a special team of inspectors to the airline's headquarters and recertified it in about 6 weeks.

According to FAA district officials, the 660 hours of inspector time used to recertify the airline represented substantially more time than was spent by inspectors trying to revoke its certificate.

Moreover, FAA estimated that in 1984 it devoted on average about 200 inspector work hours per year to inspecting an airline, so recertifying this one airline alone took the time needed on average to inspect 3½ airlines.

So, in summary, our work over the past few years at FAA shows that FAA can improve its safety related air traffic control and airline inspection functions in a number of ways, including additional trained and experienced staff. FAA began to address its inspection related problems a few years ago, and has now also acknowledged that some changes are needed in its air traffic control functions.

But these and other safety related functions cannot be fixed overnight, and require FAA's continuing commitment toward reviewing, revising, and updating regulations, establishing better management systems, hiring and training additional qualified staff, and improving its use of the current technology.

We think the long-term nature of the problem and the level of public interest and concern suggests that FAA's progress should be carefully monitored.

That concludes my statement, and I would be happy to answer questions.

Senator KASSEBAUM. Thank you very much.

Ms. Goldman, I would like to ask you first, you commented that the board unanimously did not support making recommendations mandatory on the FAA.

Ms. GOLDMAN. Or any other body, I might add.

Senator KASSEBAUM. I think that your comments on that are well taken. I would like to ask, because this has come up at other hearings, what type of followthrough is made on your recommendations to the FAA, and whether records are kept of those recommendations and responses?

Ms. GOLDMAN. Oh, indeed. In fact, that is a system. We are always trying to improve our system, and over the years I have been at the Board that is an area that we have been working on a great deal. I think again I can speak for all of the members, but with Jim Burnett and I having been there the longest; it is something we have both been concentrating on a great deal. We have a regular followup procedure, and if we haven't heard from an agency in any particular period of time, as we have testified before this committee and other agencies, we get back to them. We come here and remind you at the hearings so that you are prepared when you question the FAA Administrator what recommendations have not been complied with.

I am fond of saying that we are nags, and that is the major way that we do keep at it, by paying as much attention in the public arena as we can to areas that we think need to be improved. I would point out that in some of these cases, our differences revolve around the amount of time to accomplish the goals. For example, we have discussed Delta flight 191 on which the Board held a meeting 2 days ago to determine probable cause. At issue, there was the development of weather detection systems and the implementation, for example, of Doppler radar, one technique for better weather identification. That is something that the FAA has in progress in line with recommendations which the board has been making for a number of years. Our difference now is one of the pace of the im-

plementation and disagreement somewhat among us as to how much more quickly the FAA might move on that, but that is something we follow regularly. The staff has conferences back and forth, and we I believe, are on top of that.

Senator KASSEBAUM. Well, let me give you an example. In the context of runway incursions, I believe the Board has made recent recommendations to the FAA regarding controller on-the-job training, controller supervision, and better data analysis on the part of the FAA. What is the FAA doing about these recommendations at this point? What response have you received concerning those recommendations?

Ms. GOLDMAN. I would have to look, Senator Kassebaum. I confess, for the runway incursion study, whether a formal letter has come through on all of those, I am not sure. In the particular recommendations that we made almost at the same time regarding the incidents that were brought up this morning about the near misses at Chicago, we have had a dialog on that. The Administrator can speak for himself on that. There was a disagreement in terms of how that would be handled. The FAA has one notion in terms of how they will handle shift overlaps to get at one of the problems we talked about. They indicated they are going to try that for a time. We disagree with that. We still think there are problems. We have some other ongoing investigations in Chicago just because of the fact that that recommendation was not complied with to see if the way our recommendation was or was not implemented was a cause, and we will have to take further action if this does not work out.

That was a case of their saying we think we have a better idea. We are going to have to test that.

Senator KASSEBAUM. But do you feel comfortable that the working relationship between NTSB and FAA, including followthrough on NTSB recommendations, is progressing as it should?

Ms. GOLDMAN. Yes, the short answer to that is, "Yes." We feel the tradeoffs would be detrimental if it were made mandatory. We realize that we would like to have all of them adopted and sooner than usual, but we are concerned for the adverse consequences that they were all made mandatory.

Senator KASSEBAUM. I would like to ask you about your finding regarding the L-1011 that wind shear was a principal cause. When we held a hearing on aviation safety in the fall, one of the things that we discussed for a fair amount of time was whether simulator training of pilots was adequate to prepare them to deal with wind shear. I don't know whether you feel you could comment at this point, but is there evidence that this kind of training would have been of use in this particular accident?

Ms. GOLDMAN. Right. We actually found three factors to be of basically equal weight in our cause, and in fact what we cited was that there were problems of weather detection, that the equipment is not on line, and the speed with which information about severe conditions is not made in a timely fashion. That embraced the National Weather Service role, the air traffic control role in that, and training. As you point out, the airlines are doing training now, and in fact FAA has a project ongoing called an integrated wind shear training program, which, when it is completed—and we are pleased

with the progress of that—it is in response to earlier recommendations from other wind shear accidents. We feel that more appropriate training is going on, will go on. There is not unanimity of opinion among the various experts in the field, for example, on escape from wind shear, things like pitch attitude and a variety of factors. So, for that training program to be done in a way we would like to see it, that is still an ongoing project.

We feel, however, again, with the pace of that, that is a problem, and then that gets to the crew, and the other factor of training is training to escape from wind shear when you are in it. The major factor as far as we are concerned first, and has been repeated, is avoidance, avoidance, avoidance, and therefore, we place in the crew some responsibility in that we felt that seeing the conditions they were going into, the judgment should have been made, A, to avoid the storm, or, if in it, to have broken off the approach sooner, so we included all three factors in the cause of 191.

Senator KASSEBAUM. Thank you very much.

Senator Exon.

Senator EXON. Thank you, Madam Chairman. Because of a previous commitment, I have to leave. I will be back very shortly. I just have one short question of our two expert witnesses. I thank you for your testimony. It has been very interesting. Let me just ask this one general question. Do both of you approve of the basic thrust of S. 2417, and do you think the basic thrust of it may help us work out what I sense is a growing concern about the overall matter of adequate safety among our commercial airlines?

Ms. GOLDMAN. In terms of our Safety Board, we have evaluated this, and we have taken a cursory look at several other studies that have come out this year. I think we are agreed on the goal of trying to make the FAA a better agency and more effective at dealing with the various problems that it has to.

Senator EXON. Are you speaking, then, Ms. Goldman, for your Board?

Ms. GOLDMAN. Well, I am speaking, I believe, because the Board—we always clear our testimony with all the Board members before we testify. We would be cooperative in any way we can if this Commission goes forward. If it goes forward, we would like to see the changes.

Senator EXON. Well, then, you are generally in support of the thrust of S. 2417.

Ms. GOLDMAN. We think anything that can get at making the FAA a better agency, if this is the way that you believe it should be done, we will certainly support you in that regard.

Senator EXON. I will not pursue it any further.

You would make an excellent U.S. Senator.

Ms. GOLDMAN. I have had good training. Thank you, Senator Exon. I live with a former Senator.

Senator EXON. Can you be a little more specific?

Mr. McLure, can you be a little more specific?

Mr. MCLURE. Probably not. We think our work probably showed that FAA has a lot to do. It has a lot going on. And we think monitoring what is going on and monitoring its progress is a good idea. How to do that is really something that we do not recommend one

method or another on. We are certainly part of whatever method would be used.

Senator EXON. Thank you very much.

Senator KASSEBAUM. May I follow up on that for a moment? Do you feel that this Commission would be duplicative of the work of the GAO in this regard?

Mr. MCLURE. It would depend on what they did.

Senator KASSEBAUM. Well, you have just had a major study on aviation safety.

Mr. MCLURE. We certainly have an ability to get into specifics in specific areas that most organizations do not have because of our access through our basic legislative responsibilities. I think it would be hard for a commission to do the kind of work we do, so I do not think there would be much risk of duplication. I think the Commission could certainly do a different kind of work. I think there are other means to do that as well. I think many commissions have been very successful, and other commissions have been less successful. You know, it is really hard to say whether a commission would do what is needed.

Senator KASSEBAUM. Thank you very much.

Senator Kasten.

Senator KASTEN. Thank you very much.

Mr. McLure, we have discussed on a number of occasions the questions of inspectors. In your testimony you said your review suggests several steps, and you include identifying who is inspecting which airlines, and how frequently, so as to better allocate its existing inspector work force and the planned additional personnel. You also said it would seem prudent for FAA to know what entry level knowledge and skills are appropriate for aviation safety inspectors and to implement an effective screening program to identify applicants.

Can you tell us what, if any, progress is being made on these two specific steps that you have recommended? Specifically, do we know more about who is inspecting which airlines when and why? And No. 2, how would you characterize the initial level of competence or whatever you want to say, the initial level of knowledge, in your words, of inspectors?

Mr. MCLURE. When Admiral Engen and Tony Broderick assumed responsibility for these things, I think they recognized right away the same problem that we have identified and have created a system to keep track of what the inspectors do. Like any new system, and you know, it requires that people learn how to use it, it requires that they get hardware put together that works together, and those things right now are not working out very well. They are trying to do that.

Senator KASTEN. You say those things now are not working out very well?

Mr. MCLURE. No, the inspectors are not using the systems that have been provided very well, and each district office, about 90 district offices, has computer equipment to help them roll up this information and send it back to headquarters, and the computer equipment does not work with each other. That is, one district office cannot really communicate very well with another district office, and in the process of rolling all of this information up, we do

not think FAA headquarters gets very good information out of that system about what is being inspected and who is inspecting it and what they are finding as a result of the inspection.

Senator KASTEN. It just seems to me that that is critical to the whole process here. If you do not know what you are inspecting, and if one group does not know what the other group is doing, and you have instances in your reports where you have got one airline or group of airplanes or one classification that has been inspected and reinspected and then reinspected, and then there is another group or classification or area which has never had an inspection. Now, are you saying to us that this is still going on despite the steps that they are taking, or are you just saying that they have not done as much, they are not moving in the right direction fast enough?

Mr. MCLURE. I am saying it is still going on, but not intentionally. They have created a system intended to fix that problem, and I think they are going to continue to work with the system until it does fix the problem. I am saying unequivocally right now, though, that they still do not know what is being inspected, and how frequently, and what they are finding as a result of these inspections in FAA headquarters.

Senator KASSEBAUM. Well, I think that is simply unacceptable. We have gone through a year or two of hearings and work with the FAA. It is unacceptable for us at this point not to know what is being inspected, how it is being inspected, why it is being inspected, and we will continue our investigation of these issues.

I have just one final question. I think that we have all agreed that the levels of safety inspectors are unsatisfactory. I do not know if you were present to hear my statement, but basically we now have fewer inspectors than we had 10 years ago, and we have significantly more airplanes. More important, however, we have an increase of close to 300 percent in the number of airline operating companies.

That makes the inspection process more complex and complicated, obviously. Could you tell us what would be, in your view, an appropriate level of airline inspectors, notwithstanding our concerns about new entrants which I will put aside in the interest of time? I have taken the position that we ought to have roughly the same type of ratio of inspectors to carriers that we had in 1978, before deregulation. Could you tell me what in your opinion would be the appropriate number of inspectors, either expressed in terms of total inspectors or as a ratio in relation to 1978 levels?

Mr. MCLURE. No; FAA probably cannot right now either, although one of the things they are doing in response to this problem is trying to better define what inspection tasks are necessary, how many inspections should be done, what kinds of inspections should be done for the various kinds of airlines that they take care of, and they are also trying to get a better handle on how long these processes actually take. They are trying to set up work standards. When they have those things done, then they will be able to give you a much better answer to that question. Right now we are all a little bit in the dark about how many inspectors are actually needed, and I think most people are going sort of on the kind of rule of thumb that you are using, which is, if you have more air-

lines than you used to, it seems to make sense to have at least as many inspectors as you used to, and maybe more.

Senator KASTEN. Which would mean that you and others looking at this would agree with the general thrust of my statements, which is that we do have more airlines and more inspectable, if you will, items or parts, and, in fact, we have fewer inspectors and we do not know what they are inspecting, why or how. We need more inspectors, and then we have to deal with these questions about the kind of inspecting.

In conclusion, Madam Chairman, we get on the airplanes today, and you will see the ashtray is broken, or you will go into the bathroom and they will be out of towels, or the faucet will be dripping. I think that passengers today are looking at that broken ashtray or looking at something else that they can see, and wondering what else is going on here that I cannot see. That is what is going on. The people just do not know.

Now we see the questions here with not knowing what is being inspected, with some airlines never being inspected, with some systems never being inspected at all, and there is just a tremendous, tremendous concern. I think that the legislation which the Senator from Kansas, Senator Kassebaum, has introduced is a step in the right direction, and I hope that we will move forward with this. Thank you, Madam Chairman.

Senator KASSEBAUM. Thank you, Senator Kasten. For the record, I would just like to say that it is Senator Byrd who introduced this legislation.

Mr. MCLURE. And I would like to say that FAA has, this year, set up an inspection schedule that makes, mandatory that every airline be inspected, so that will no longer occur, that airlines do not receive any inspections during the year.

Senator KASSEBAUM. Thank you.

I would like to followup just a bit because I have been troubled at our various hearings that occasionally we all seem to work from different base analyses, statistics, and data.

Following last fall's hearing I sent a rather detailed letter to Admiral Engen with various requests and observations that I felt were important. One of these dealt with inspections and maintenance, and I offered to work closely with you to try to remedy the disparities that have been documented by the GAO.

I would just like to quote a bit from a section of the answer, which reads as follows:

> Some of the report was misleading in this respect in that it was primarily based on a statistical analysis of operating errors versus number of inspections, and it did not delineate the variances in complexities between a large, complex part 121 air carrier and the small part 135 carrier.

Does this raise further questions?

Mr. MCLURE. I'm not sure I understood the response, which is not especially unusual.

There is a difference in kinds of inspections, and there are differences in the inspections you do for various kinds of airlines.

Senator KASSEBAUM. That's right. And you spelled those out in your report, did you not, or were these all lumped together?

Mr. MCLURE. We thought we spelled out the differences, yes.

Senator KASSEBAUM. Thank you very much.

We appreciate your testimony.

Admiral Engen, it is a pleasure to welcome you once again. You have had the opportunity to hear some of the comments and observations, and I am sure everyone will be looking forward to your testimony and your responses.

STATEMENT OF HON. DONALD D. ENGEN, ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION, ACCOMPANIED BY ANTHONY BRODERICK, ASSOCIATE ADMINISTRATOR, AVIATION STANDARDS; AND NORBERT OWENS, DEPUTY ASSOCIATE ADMINISTRATOR, AIR TRAFFIC

Admiral ENGEN. Thank you, Madam Chairman. It is indeed a pleasure to be here.

I have brought with me for the question and answer period, on my right, Deputy Associate Administrator for Air Traffic, Mr. Owens, and, on my left, Associate Administrator for Aviation Flight Standards, Mr. Broderick.

I would like to give you a precise, quickly, if I can, of my statement and address some things that I think are particularly cogent.

The past 10 years have proven to be very challenging for the FAA. The FAA has weathered a difficult strike; it has introduced the national airspace systems plan, the largest upgrade of its facilities ever; it has adjusted to great airline growth after deregulation; and it has accommodated first to a peaking of general aviation growth, and then a leveling off while facing inadequate resources to fully meet those changes.

The agency has been virtually under a microscope for the past 5 years, with wide-ranging review of nearly every facet of its operations, with particular focus on the air traffic control system and our surveillance functions.

Challenges do remain to be addressed. Improvements will still be needed, but many important lessons have been learned.

In my view, the FAA is now a stronger organization, having gone through a very difficult period of the first half of this decade.

As the subcommittee is well aware, in 1981, the controller's union struck in an attempt to seek inordinate wage compensation by bringing the Nation's air transportation system to a halt. Fortunately, that effort was unsuccessful.

But, keeping the system operating with reasonable efficiency while preserving its high safety levels and concurrently taking the necessary steps to rebuild the system has not been without its costs.

Even so, it has proven to be a great opportunity for us to better understand the workings of the air traffic control system and to reexamine the traditional ways of doing business within that sytem.

There has been great change. Virtually every aspect of that system has been looked at, ranging from safety performance to the human resource elements.

Operational control over the system is now exercised at the headquarters level, rather than in the regions—meaning that our day-to-day involvement with the system is much strengthened over the past.

We have also made alignments in air space to simplify air traffic control requirements, and we refined flow control procedures for the Nation that now keep airplanes on the ground, rather than holding en route when weather conditions are bad.

We have improved our screening process for new controllers, and have made improvements in the actual training. We have added new equipment and software to our facilities, such as the automatic error detection system and program which alerts us automatically whenever a controller experiences an operational error or a pilot deviates from his approved flight path.

We have restaffed our facilities with highly qualified and motivated air traffic controllers, and have achieved 98 percent of our targeted staffing level for this fiscal year.

As of the end of June, our controller work force totaled 14,262, as has been said earlier, compared to our yearend goal of 14,480 employees.

I would be pleased to talk about that later on.

Importantly, we have made progress—although more remains to be done—and we need to concentrate particularly in promoting better human relations in our air traffic facilities.

In short, although the demands placed on the agency to respond to the air traffic controllers' strike in 1981 have been high, they have been met.

Moreover, we have benefited from being placed in a position where we have had to examine all facets of the operations of the air traffic control system in a way that was never before done.

Significant attention has also been focused on our inspection and surveillance responsibilities. As a member of the NTSB, I grew concerned about the adequacy of the FAA's surveillance and enforcement resources, and the ability of the FAA to meet a growing and changing industry.

Secretary Dole had that same concern, and before I joined the Agency, she had directed that the FAA fill again those inspector positions that had been reduced.

A variety of reviews we conducted of both the air transportation industry and ourselves confirmed to us that we were not adequately staffed to conduct appropriate levels of surveillance of the industry.

There were other problems as well.

We had not prioritized our work functions at the national level in a meaningful way, so that the most important work was done first and then our inspector personnel would go on with their other work. Too often, certification of a new air carrier was accomplished at the expense of surveillance over existing carriers.

We had not established minimum levels of surveillance to assure that all operators were inspected each year. We were not examining air carriers'-operations in a detailed way on a recurring basis. We had not given sufficient policy guidance to our work force, nor had we standardized our practices enough to insure that the inspection work done in one office or region was, indeed, comparable with another.

We had decentralized to the degree that headquarters was sometimes too far removed from what was actually occurring in the field.

Consequently, we put into place a sweeping program to restructure our entire surveillance program. Inspection handbooks are being rewritten right now to provide our inspector work force with up to date, standardized guidance in a more detailed way than we have ever done before.

Inspection training courses are being improved, and a variety of new seminars presented. National guidelines have been established calling for specified minimum levels of surveillance by type of inspection and by operator. And, we have instituted cyclical, indepth reviews of all facets of the aviation industry.

Other steps have been taken as well to revitalize the agency's entire surveillance program, to include substantial increases in staffing. We are in the process of bringing on 500 additional inspection personnel. This year, we are adding 300 of those positions. For the next year, we have requested an additional 138, and we anticipate requesting the balance in 1988.

Other FAA programs have similarly undergone careful scrutiny both within the agency and by the Congress and other external sources. The FAA Security Program, for example, has been examined from top to bottom over the past year, to respond to an increased security threat throughout the world. Aggressive changes have been instituted in our security requirements as well as in the staffing of our inspector and air marshall functions. Attention has also been focused on our air traffic control modernization efforts, the NAS Plan, if you will, which is an area that has continued to progress.

By the end of this fiscal year, more than 80 percent of the major NAS plan projects will be under contract.

Given these factors, I do not support the enactment of S. 2417, largely because I believe such a study would be unnecessary.

I do not resist the idea of an independent commission to examine the FAA because of concern for what it might find. To the contrary, we have benefited tremendously from what we have learned of the Agency as we have moved through some very difficult times.

But this is precisely the point.

As a direct result of having to meet a variety of difficult challenges, and as a result of the depth of oversight we have received from bodies, such as this subcommittee, to determine how we are meeting those challenges, we have learned a tremendous amount about where we needed improvement. We have established plans to overcome the deficiencies we have noted, and we are well on the way toward achieving the improvements that we are seeking.

I am not unequivocally opposed to a commission. But, in my view, it is time for us to get on with the needed improvements that we have already discerned, rather than taking additional time to cover ground again that we have already explored.

Before closing, I would just add that although there are a number of areas where I felt there was a need for improvement or fine tuning in the FAA, the agency has, nevertheless, performed consistently well. My efforts have been directed at working within one of the finest organizations in the public or private sector to make it even better.

I believe the changes we have made and are making and the record of the agency's performance do bear this out.

Today we are handling greater levels of air traffic than ever before, and we are doing it safely and we are doing it efficiently.

The serious delay problems that we experienced two summers ago were addressed. There will be delays again, and they are mounting this summer. But these will be directly related to available airports and to weather.

The safety level of the air traffic control system has been consistently high. Operational errors by our controllers have continued to decline.

The safety record of the airlines and the commuters has continued to improve. In fact, despite the concerns of some before the enactment of the Airline Deregulation Act of 1978, that safety, particularly for the commuters, would suffer, the overall safety record has indeed improved since deregulation. The commuter safety record, in particular, has improved tremendously. The reliability of our air traffic control equipment also continues to get better.

As I have acknowledged, we have not been perfect. But, what the FAA needs now is to continue with the improvements that we do have in progress. Rather than a protracted examination of the agency or the industry, the traveling public, in my view, would benefit most by completion of the agenda we have set out for the FAA and by continuing to assure that the FAA is provided adequate resources to meet its important safety obligations.

That concludes my presentation, Madam Chairman. We would be very pleased to answer any questions.

Senator KASSEBAUM. Thank you very much, Admiral Engen.

I'd like to start with surveillance inspections. You touched on that.

One of the points that the GAO report made, which I think is a good point, is that the minimum applicable standards could focus, and perhaps, should focus, on particular warning signs, such as large amounts of contract maintenance and inadequate internal management controls.

I wonder if you have addressed those recommendations and suggestions?

Admiral ENGEN. Thank you, Madam Chairman. I would like to address that quickly, and then I would like to have Mr. Broderick add a postscript.

Indeed, we look at an airline across the board. We look at its financial character. We look at the loans that it has outstanding and that its loan payments are being met.

When things begin to not look good, either financially, or if pilots call in on our hotline, or when mechanics call in, we begin to go to full alert. We do indeed begin to put the heat on that individual carrier and redouble our efforts and see if there is fire where the smoke is.

Tony, would you like to add anything to that?

Mr. BRODERICK. Yes, thank you.

Madam Chairman, last year, before we had the minimum standards you referred to, we had no standard at all for a minimum inspection. The purpose of enacting the guidelines that we issued from headquarters was to fill that vacuum and establish once and for all that the kind of problem that we ran into that GAO documented and that Senator Kasten referred to earlier will never

occur again—that is, problems which showed that certain airlines for one reason or another had not received any inspections.

So we established a minimum level of inspection for every airline, indeed, for every aeronautical operation in the country, that must be followed by the field.

We recognized at the time that that was only the beginning of those guidelines. It was the first issuance. The additional factors that GAO referred to, that Mr. McLure referred to, in fact, represent the kinds of things that we developed through our national air transportation inspection and our review of that data.

It is those indicators which we will now, this year and in succeeding years, as the industry changes, be folding into that set of minimum guidelines.

So, when you see the October 1, 1986 guidelines, they will be a little bit different from the ones that we issued for the first time last year, and will, for the first time, include these kinds of factors.

Senator KASSEBAUM. How do you answer Mr. McLure's observation that the computer analysis is not working well yet, and that the minimum inspection guidelines do not incorporate the indicators identified by GAO?

Mr. BRODERICK. The problem that we have, I think, is really best described as one of whether or not we have real time access to data. That is what Mr. McLure spoke of.

We do not. We do not for two reasons.

One is just a lack of the main administrative computer facility capacity in Oklahoma City. The second is the lack of an adequate communications network.

We have, in fact, signed a contract for a much improved communications network for administrative data that will be coming online shortly—I hope by the beginning of next year. We also are preparing specifications for and will be purchasing an enhanced computer capacity capability in Oklahoma City. Within the next year I would expect significant improvement in the real time access ability that we have.

I think it is important to point out, though, that we have essentially overnight capability.

I, for example, can, and have done so, call the Houston office or the Dallas office or the Los Angeles office and ask them, either by airline or by the entire office, to please run me now, from their computer, a detailed run of the inspections that they have done, either all of them or for some particular reason, and put it in overnight mail to get to me the next day.

That is a very effective tool and I think probably that is the kind of response that is most appropriate for us here in headquarters. We do not monitor these things on an hour by hour basis, but, rather, review them on a weekly, monthly, or quarterly basis.

Admiral ENGEN. In my opinion, Madam Chairman, I think that is what Mr. McLure was getting at. And I agree with his comment that information at the central headquarters previously has not been readily available.

This is exactly what we are working on. We are establishing a national program that is going throughout the Nation. We could provide for the record, if you wish, a run on any particular airline

or group of airlines for you tomorrow morning. I would be pleased to do that.

[The information referred to follows:]

WORK PROGRAM MANAGEMENT SYSTEM

The FAA data processing system for aviation safety inspection activities is called the Work Program Management System (WPMS). WPMS is the tool used to plan and account for the work activities of FAA's safety inspectors. The system is a stand-alone computer system developed for use in FAA Flight Standards Field Offices. WPMS contains specific information on aviation safety functions such as surveillance, investigation, certification, and enforcement activities. The system is capable of monitoring the status of pending actions; and it can correlate pending actions with associated static data such as name of operator, airman, air agency, pilot in command, registration number, and make model, series aircraft, etc. Since the implementation of WPMS in 1983, the FAA has had the capability to effect standardization of safety related work functions and to monitor those activities on a national basis.

WPMS was designed as a stand-alone application within each Flight Standards Field Office. However, data are also mailed via floppy disks from 83 Flight Standards Field Offices to an FAA host facility where a conversion process is used to compile national information and produce comprehensive quarterly reports of planned and accomplished safety inspection activities. Plans are underway to improve the transmission of data from FAA field office in Fiscal Year 1987. An electronic process will transmit data directly to an FAA computer mainframe. The FAA is also planning the development of direct access to the national system by headquarters management personnel.

An example of the type of data contained in the system is illustrated below in a report recently compiled for a hearing before the House Committee on Public Works and Transportation, Subcommittee on Aviation. These data were extracted from WPMS for nine district offices in FAA's Southwest Region:

SW REGION INSPECTION DATA—AS OF MAY 15, 1986

Type of inspection	ABQ	BTR	LOVE	DFW	HOU	LIT	LBB	OKC	SAT	Total
Repair Station/Avionics	46	14	6	5	12	45	17	9	7	161
ATCO/Airworthiness	124	166	115	9	96	234	118	66	187	1,115
ATCO/Operations	217	621	239	16	303	307	111	305	401	2,520
Air carrier certificate	6	12	10	2	19	10	17	0	6	82
Total	393	813	370	32	430	596	263	380	601	3,878

Admiral ENGEN. But I do take strong exception to anyone who would say that we don't know who or what is going on out there, or why. We have a very good and positive handle on our inspection program.

Senator KASSEBAUM. You have stated that in the past, too much time was spent on certification of new carriers versus inspection of the present carriers. The GAO, however, has stated that they found last year that inspectors themselves estimate that they spend an average of 82 percent of their time on certification.

Is this still the case?

If so, how can we achieve a better balance of time?

Admiral ENGEN. I think that Mr. Broderick can probably answer that in much greater detail. The trending, of course, is this. We are looking at the airlines today. We have set the priority on the existing airlines. We have set the priority on inspecting those in operation now because those are the people you want to look at.

Tony, did you wish to elaborate?

Mr. BRODERICK. Yes.

I think that is really the answer to the question.

We now have specific written guidelines which set surveillance responsibilities as the first priority, accident investigation as the second priority, and certification activity and other things that follow are down the priority list.

The inspectors recognize and the people who are seeking certification priority also recognize that we recognize that it is not top priority, that safety surveillance is No. 1.

So, I think the answer to the question is that we have solved that problem from the viewpoint of pressure on the inspectors—at least, how they deal with the pressure. The pressure will still come from people who seek to go into business.

Senator KASSEBAUM. You also stated, Admiral Engen, that you felt real progress had been made in promoting better morale and human relations in the air traffic facilities. Can you give me some specific examples?

I would also like for you to address the suggestion I made following last year's subcommittee hearing on air traffic control safety that you report to me on any gains you have made in the area of controller stress and morale, particularly regarding the ability to deal with peak period traffic.

This has been mentioned by many who have addressed this issue, including the Jones Commission.

I wonder if you have succeeded in scheduling controller work shifts in such a way as to relieve some of this strain which seems to abe affecting controllers.

Admiral ENGEN. Yes.

Again, let me begin and then I will pass to Mr. Owens, because he can provide some specifics.

Let me say that being an air traffic controller is indeed a stressful occupation. We all recognize that, and they recognize that. I would not belittle that one bit. We need to provide relief and we need to be sure that we provide adequate depth of people in our air traffic control facilities.

We are ever mindful of this.

I would say to you, Madam Chairman, that we have come back probably—and I am going to pick this out of the air right now—to an 80- or 85-percent level of recovery, if you will excuse that term, because the system is indeed operating in excess of what it did before the strike. We are operating beyond that pre-strike capacity. From a standpoint of morale and goodwill amongst our employees and the efforts we are putting in there, we have come back.

We have some specific centers where training is a continuing problem, where overtime is a continuing problem, and we are dealing with that through a program we call the cross-option program. We are also transferring sectors, as necessary, to simplify air traffic control requirements, nationally.

What this does is to recognize the individual controller. It says that we do not want to overburden the individual and we want to have each person feeling right about his or her job.

There is a different category of person in the air traffic control system today than there was before. The person today will typically be a schoolteacher or could be a pilot or could be a young person out of the military. It is a different category of person that we are

dealing with. We are trying to cater to this new population in our human resource management efforts.

We have just completed, this month, and are beginning to evaluate, the second biennial human resource management review, which polled the entire FAA again. The first poll was conducted in 1984. I will be able to report to you by the end of the year, I would hope, what the results were for 1986.

Mr. Owens, did you want to add any specifics to this?

Mr. OWENS. Yes, Admiral.

Madam Chairman, I think there is evidence of programs implemented to address the concern of aircraft bunching and of the increasing number of aircraft that are in today's system. It is increasing, and we are concerned about it.

Through our traffic management units in the en route centers and in headquarters and the various programs that they have implemented, we have been able to spread out those peaks.

Now, I will readily agree that by doing that, it means that the system is busier over a longer period of time because we do not allow too many airplanes into the system.

But, in fact, delays have increased this summer. I think there are two major factors in this.

One, of course, is the weather, which is a primary factor. Unfortunately, it has been a little bit worse this year than it has in the previous two summers. The other is that there are more airplanes in the system, and that does require a better job or a better way of metering that traffic into the active system. I think we have been able to accomplish that.

As for matching people to that traffic, we are now introducing into our centers a better way of staffing with the resources that we have by establishing multiple shifts—that is, people coming to work at 6 in the morning, 7 in the morning, 8 in the morning, and 9 in the morning and working their 8 hours, rather than everyone coming in, say, at 7 o'clock in the morning.

By doing it this way, we have found that we are able to have the adequate number of people in position to work the traffic and still accommodate adequately the breaks that are necessary for the controllers.

Senator KASSEBAUM. I would like to touch for a moment on runway incursions.

The NTSB's new report on the problem found that the FAA still did not have the data system to really adequately analyze runway incursions.

Is this something that you are working on at this point?

Admiral ENGEN. Absolutely, and the NTSB was correct.

We, I think, did not keep tabs on runway incursions in the past, and we are doing so now. They have pointed out to us the need for a data system. We have done some things ourselves.

In the instant case that was discussed a little while ago, concerning the incursion at O'Hare, that occurred on a Saturday morning, and by Sunday morning, we had implemented procedures there that would rectify that.

I believe in moving out rapidly, in taking a first fix at a problem and changing things and fixing them. We will wait for the NTSB to get there and give us their recommendation, and then we will work

with them and adopt their recommendation. But I believe in moving fast, and we did that.

We do have a way of analyzing runway incursions, and that is ongoing.

Senator KASSEBAUM. Was the incident at O'Hare due to inadequate coordination of the controllers?

Admiral ENGEN. The incident at O'Hare was due to the same reason that a pilot lands wheels up. It was a human factor, a human error.

A controller had just come on watch and was busily involved in clearing two airplanes for takoff at two intersecting runways—and we do this, and we do it safely—when he was presented with a need for additional clearances. His supervisor said, "I'll do it." Well, the controller was very proud of what he could do, so he said, "No, I'll do it, too."

In that moment, he lapsed in his mind the fact that he had one airplane rolling on one runway and another one about to roll on the other. He cleared the other airplane to take off.

It is a human error that we deal in.

It is like a housewife who might slam a door on her hand. It is like a pilot who forgot his clearance and did not comply. An air traffic controller is human, too, and this gentleman made a mistake.

We are still working with the NTSB, and I would not argue this with the Board, at all, because we are both after the same thing, safety. What we have done is bring on the new watch 5 minutes before they would normally be there, and they observe what is going on. Then the old watch stays for 20 minutes more and provides a backup so that there is a continuum there of what is going on at the field.

Senator KASSEBAUM. Well, despite what you have suggested, I do think it is a little more than a housewife simply slamming her hand in the door.

The supervisor's role has come up before in these hearings. Should not the supervisor be responsible for that decision? Isn't there a hard and fast procedure to govern such situations, and shouldn't it be followed?

Admiral ENGEN. There is, indeed. It is very well spelled out. It is codified and the responsibility does rest with the supervisor.

By definition, the supervisor supervises several people. But he or she is a very accomplished person, and the responsibility rests with each one of them.

The primary responsibility rests with the air traffic controller. The supervisory responsibility rests with the supervisor.

There is a clear delineation. And there is no gap there. The supervisor overlaps, and he can override the controller at any time and should do so.

Senator KASSEBAUM. And should have.

Admiral ENGEN. And should have.

Senator KASSEBAUM. And is the procedure that the old shift stay on for 20 or 25 minutes being followed everywhere——

Admiral ENGEN. Yes, ma'am.

Senator KASSEBAUM [continuing]. Or are you just doing this in Chicago?

Mr. OWENS. We have extended the test at O'Hare, and we are in the process of selecting test facilities in each of our regions to give them an opportunity to see how this will work out.

What we are not sure of is what is the adequate length of time that the relieved controller should stay on to monitor the relieving controller. Obviously you cannot share responsibility in the instance of clearing airplanes to land or take off. It has to be one person's responsibility.

We are a bit concerned that there may be an interference factor that comes into it if a person is there for too long. This is what we are analyzing.

Admiral ENGEN. We are not waiting. I would hasten to say that we will take that action as rapidly as possible.

At the top 25 airports in the United States, 17 of them operate with intersecting runways. So what we determine at O'Hare will be put into effect at those major airports.

Senator KASSEBAUM. You testified, Admiral Engen, that you did not believe an independent safety commission was necessary at this time.

I can certainly appreciate that you may feel that some of the FAA's critical workload is burdened by the large amount of oversight that you have to respond to. I assume that you would feel an independent commission is just one more oversight responsibility that could detract from your critical work.

I think this is a question that we need to ask ourselves as we analyze the independent commission—at what point is it overload? How can we make better use of recommendations and coordinate oversight efforts?

You have spent all morning here, as have two of your top assistants. I have to ask myself how beneficial this is to the overall functioning of the FAA. We need and appreciate your testimony. It is very important to explore personal concerns with you. You apparently do not believe there are critical problems out there but I know you must emphasize the bright side.

Admiral ENGEN. May I respond to that?

Senator KASSEBAUM. Please do.

Admiral ENGEN. You know, I looked at the record, and since 1978, when deregulation began, we have had 287 IG or GAO reports done on the agency.

Eighty-three of those were GAO draft reports. We have had 241 congressional oversight hearings.

I would say that the system is working very well. We have a watchdog, and I believe in the Independent Safety Board. The Safety Board is our watchdog. When something goes wrong in the system, the Safety Board comes in and literally revalidates the FAA. Each time they say what is wrong or what happened, and we take action.

So it is not like it is something of a bureaucratic bubble out there that is just bubbling along. We are a very dynamic agency. Believe you me, we have really taken on a great deal of change in the last few years, and we are moving ahead.

Senator KASSEBAUM. Thank you very much, Admiral Engen.

I will let you get back to the important business of running your agency.

Mr. Broderick, Mr. Owens, thank you.
[The statement follows:]

STATEMENT OF HON. DONALD D. ENGEN, ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION

Madam Chairman and Members of the Subcommittee: I welcome the opportunity to appear before the Subcommittee today to discuss the topics of air traffic controllers and aviation safety inspector staffing, and to provide the FAA's views concerning S. 2417, which would establish an independent aviation safety commission to review the performance of the FAA, its organizational structure, and the impacts on aviation safety of the economic deregulation of the aviation industry.

The past 10 years have proven to be very challenging for the FAA. The FAA has weathered a difficult strike; has introduced the National Airspace System Plan, the largest upgrade of its facilities ever; has adjusted to great airline growth after deregulation; and has accommodated first to a peaking of general aviation growth, and then a leveling off. The agency has been virtually under a microscope for the past five years with wide ranging review of nearly every facet of its operations, with particular focus on the air traffic control system and our surveillance functions.

Being a student of history, I find myself faced with similar problems of Administrators past. I am singularly impressed with how the interests of Congress have not changed nor has the criticality of what the FAA does been altered. Challenges remain to be addressed, and improvements are still needed, but many important lessons have been learned. In my view, the FAA is now a stronger organization, having gone through the difficult period of the first half of this decade.

As the Subcommittee is well aware, in 1981, the controllers' union struck in an attempt to seek inordinate wage compensation by bringing the Nation's air transportation system to a halt. Fortunately, that effort was unsuccessful. But keeping the system operating with reasonable efficiency while preserving its high safety levels, and concurrently taking the necessary steps to rebuild the system, was not without its costs. It proved to be a very demanding time for agency employees who work in air traffic control and other disciplines as well. It has occupied much time of the agency's senior staff, responding to Congressional concern and oversight while attempting to solve daily and long-range operational problems as well as attitudinal and management challenges. Even so, it has proven to be a great opportunity for us to better understand the workings of the air traffic control system and to reexamine the traditional ways of doing business within that system. There has been great change. Virtually every aspect of that system has been looked at—ranging from safety performance to the human resource elements.

I am comfortable today that we understand the challenges facing the air traffic control system. In fact, with changes I have instituted, operational control over the system is now exercised at the headquarters level rather than in the regions, meaning that our day to day involvement with the system is much strengthened over the past. I noted that we have benefited from an increased understanding of the air traffic control system during the rebuilding period, and have viewed it as an opportunity to make improvements. The assignment of operational control to headquarters is but one example. We have also made realignments in airspace to simplify air traffic control requirements, and we have refined our flow control procedures which keep airplanes on the ground rather than holding enroute when weather conditions are bad. We have improved our screening process for new controllers and have made improvements in the actual training. We have added new equipment and software to our facilities, such as the automatic error detection program which alerts us automatically whenever a controller experiences an operational error. We have restaffed our facilities with highly qualified and motivated air traffic controllers, and have achieved 98% of our targetted staffing level for this fiscial year. As of the the end of June, our controller workforce totalled 14,262 compared to our end of year goal of 14,480 employees. We will reach that goal by the end of September. And, importantly, we have made progress—although more remains to be done—in promoting better human relations in our air traffic facilities.

In short, although the demand placed on the agency to respond to the air traffic controllers' strike in 1981 have been high, they have been met. Moreover, we have benefited from being placed in a position where we have had to examine all facets of the operation of the air traffic control system in a way that was never done before. This has enhanced our knowledge and understanding of the system and has afforded us the unique opportunity to make a variety of important changes and refinements to that system.

I mentoned a moment ago that significant focus has been placed on our inspection and surveillance responsibilities. This is one of the most important of the functions performed by the FAA. Our Safety regulations are only as good as their compliance rate. As a Member of the NTSB, I grew concerned about the adequacy of the FAA's surveillance and enforcement resources, and the ability of the FAA to meet a growing and changing industry. Secretary Dole had that same concern and before I joined the agency she had directed that the FAA fill again those inspector positions that had been reduced.

Since my appointment as Administrator, inspection and surveillance have been a major area to which my senior staff and I have devoted significant time. A variety of reviews we conducted of both the air transportation industry and ourselves confirmed to us that we were not adequately staffed to conduct appropriate levels of surveillance of the industry. There were other problems as well. We had not prioritized our work functions at the national level in a meaningful way so that the most important work was done first by our inspector personnel. Too often, certification of a new air carrier was accomplished at the expense of surveillance over existing carriers. We had not established minimum levels of surveillance to assure that all operators were inspected each year. We were not examining carriers' operations in a detailed way on a recurring basis, but only when there were indications of a need to do so. We had not given sufficient policy guidance to our workforce, nor had we standardized our practices enough, to ensure that the inspection work done in one office was comparable to that in another. We had decentralized to the degree that headquarters was sometimes too far removed from what was actually occurring in the field.

These deficiencies were brought home to us in a series of assessments we made in 1984 and 1985 of industry and ourselves. A critical analysis of what needed to be improved within the agency's safety surveillance program revealed to us that we needed a substantial revamping of that program. We have been underway for some time in a sweeping program to restructure our entire surveillance program. Manuals are being rewritten to provide our inspectors with up-to-date standardized guidance, in a more detailed way than ever before. Training courses are being improved, and a variety of new seminars presented. National guidelines have been established, calling for specified minimum levels of surveillance by type of inspection and by operator, and we have instituted cyclical, in-depth reviews of all facets of the aviation industry. Other steps have been taken as well to revitalize the agency's entire surveilance program, to include substantial increases in staffing. Based on my study and recommendations, the Secretary approved last September a three year increase of 500 positions in our inspector workforce. This year, we are adding 150 of those positions. For next year, we have requested an additional 138 positions, and we anticipate requesting the balance of 212 in FY 1988. We have developed a more standardized enforcement procedure. Of more importance, I see the airline industry seeking compliance actively.

Other FAA programs have similarly undergone careful scrutiny both within the agency and by the Congress and other external sources. The FAA security program, for example, has been examined from top to bottom over the past year to respond to an increased security threat in the world. Aggressive changes have been instituted in our security requirements as well as in the staffing of our inspector and air marshal functions. Attention has also been focused on our air traffic control modernization effort, which is an area where we have continued our positive momentum. By the end of this fiscal year, more than 80% of the major NAS Plan projects will be under contract.

Given these factors, I do not support the enactment of S. 2417, largely because I believe such a study would be unnecessary. I do not resist the idea of an independent commission to examine the FAA because of concern for what it may find. To the contrary, we have benefited tremendously from what we have learned of the agency as we have moved through some difficult times. But that is precisely the point. As a direct result of having to meet a variety of difficult challenges, and as a result of the oversight we have received from bodies such as this Subcommittee to determine how we were meeting those challenges, we have learned a tremendous amount about where we needed improvement. We have established plans to overcome the deficiencies we have noted, and we are well on the way toward achieving the improvements we are seeking. In my view, it is time for us to get on with the needed improvements that we have already discerned, rather than taking additional time to cover ground we have already explored. I frankly believe that there is little that would be gained from another look at the FAA, and that the time and energy which would be expended by senior agency officials in working with and responding to an

independent commission would better be justified in getting the job done that we have set out for them.

Before closing, I would add that, although there are a number of areas where I felt there was a need for improvement or fine-tuning in the FAA, the agency has nevertheless performed consistently well. In other words, it is not as if I have had to restructure an agency which has not performed well. To the contrary, my efforts have been directed at working within one of the finest organizations in the public or private sector to make it even better. I believe the changes we have made and are making and the record of the agency's performance bear this out, and I would like to take a moment to elaborate on that point.

Today, we are handling greater levels of air traffic than ever before—and we are doing it safely and efficiently. The serious delay problem we experienced two summers ago was addressed. There will be delays again, but these will be directly related to available airports and weather. The safety level of the air traffic control system has been consistently high. Operational errors by our controllers have continued to decline. The safety record of the airlines and commuters has continued to improve. In fact, despite the concerns of some before enactment of the Airline Deregulation Act of 1978 that safety, particularly for the commuters, would suffer, the overall safety record has improved since deregulation. The commuter safety record, in particular, has improved tremendously. The reliability of our air traffic control equipment also continues to get better.

Overall, the FAA's and the industry's record has been nothing less than outstanding, even as we have had to face the strike and its aftermath as well as respond to changes in the aviation industry brought about by deregulation. We have not been perfect, and, in fact, as I have acknowledged, there were a number of areas where we simply needed to do a better job. We defined what those areas were, plotted out a course of self-correction, and we have been taking those necessary corrective actions. We have not completed the job. More remains to be done, but there always will be additional ways of improving as changes occur in the aviation industry.

What we FAA needs now is to continue with the improvements we have in progress in air traffic control, in our surveillance activities, and in other key agency programs. Rather than a protracted examination of the agency or the industry, the travelling public would benefit most, in my view, by completion of the agenda we have set out for the FAA and by continuing to assure that the FAA is provided adequate resources to meet its important safety obligations.

That completes my prepared statements, Madam Chairman. I would be pleased to respond to questions you may have at this time.

Senator KASSEBAUM. I would ask the second panel to come to the witness table—Mr. Baker, Mr. Bolger, and Mr. Stephen.

I would ask you all to wait for just a moment. I think Captain Duffy has to make a flight, and we want to see if perhaps we should move him up to this panel.

[Pause.]

Senator KASSEBAUM. We will go ahead and proceed.

It is a pleasure to welcome Mr. Alan Stephen, vice president of operations, Regional Airline Association; Mr. William Bolger, president of the Air Transportation Association; and Mr. John Baker, president of the Aircraft Owners and Pilots Association.

Mr. Stephen.

STATEMENTS OF ALAN R. STEPHEN, EXECUTIVE VICE PRESIDENT, OPERATIONS, REGIONAL AIRLINE ASSOCIATION; WILLIAM F. BOLGER, PRESIDENT, AIR TRANSPORT ASSOCIATION OF AMERICA; AND JOHN L. BAKER, PRESIDENT, AIRCRAFT OWNERS AND PILOTS ASSOCIATION

Mr. STEPHEN. Thank you. I will summarize my remarks and ask that my statement be made part of the record.

Senator KASSEBAUM. Thank you.

Mr. STEPHEN. I must say in opening that I know of your ability to have a crisp and concise hearing, Madam Chairman, so I accept-

ed a dual responsibility. I am going to go over and testify at the House after this is over. So I may be here till 10 o'clock tonight.

Senator KASSEBAUM. Well, you just might be.

Mr. STEPHEN. I would like to open by recalling that last fall there were two hearings on safety of the airline industry that you conducted. We welcomed the opportunity then and I will welcome the opportunity again now to restate what our view of safety is, which is that it is the No. 1 commitment of our industry, our No. 1 priority. It is our commitment to the air travelling public.

In this testimony, I have cited on page 3 some statistics that I think need to be brought out.

First is that there are about 180 operating commuter airlines in the United States. Indeed, that is a decline of 20 percent since 1978. Our industry is in consolidation, in merger, and, as our industry is under that change, there has not been a massive proliferation of carriers. Indeed, I think it is within FAA's ability to surveil.

Although our industry is coming down, the number of carriers, the number of passengers carried is obviously up very dramatically—from 11 million to 27 million from 1978 to 1985.

The number of airports we serve is up 25 percent, filling in the voids in deregulation.

Scheduled departures have gone from 1.2 million to 2.7 million in 1985, up 138 percent. We are, in fact, fulfilling a mission.

While these measures of activity have gone up dramatically, the simple fact is that our accident record has improved dramatically. In 1978, we had 61 accidents; in 1985, we had 17 accidents. Those are National Transportation Safety Board statistics. In 6 of those 7 years, the number of accidents in this industry has actually net declined while our industry, in fact, has dramatically grown.

If you look at the rate per departure, then, it is five times safer today to fly on a commuter airline than it was in 1978, and I just do not agree that the margin of safety is declining.

You are asking for comments on S. 2417. I think it is an interesting piece of legislation. It would, of course, establish a commission. We are 14 months away from reauthorization of our Airport Airways Trust Fund, and very important questions are being asked about whether FAA has the resources to get the job done, whether the priorities are in the right place.

I think Admiral Engen cited some very interesting statistics on the number of oversight hearings and the number of General Accounting Office and Inspector General reports done on the agency since 1978. That is a very valid point.

But to the degree that S. 2417 would allow us to take a look at how the FAA ought to be chartered for the future, including such issues of whether or not it should be an independent agency, ATA has come up with a very interesting and innovative proposal—to have a Federal corporation raise questions about it. If we do have a Federal corporation, how should the safety functions of FAA be structured—remain in the department, made independent, or come with this Federal corporation.

The Safety Commission might be useful in helping to resolve that.

In those circumstances, we would be more than pleased to work fully with the commission and give it full priority.

In addition, you have asked for comments on controller staffing and on the GAO report on air carrier inspections. We have been very supportive of increased controller staffing. We are pleased that the Senate and the House has prioritized, that the administration has prioritized, having 14,480 controllers by the end of this fiscal year, that more controllers are in the budget next year.

We know that we need more controllers, and we are very, very appreciative of your leadership in assuring that the budget resolution that was recently enacted has the kind of funding for controllers, and, indeed, all of FAA operations, as an assumption. Those are realistic numbers.

The General Accounting Office report certainly does summarize some of the problems FAA has had in air carrier inspections. We are paying the price for the budget cuts that were begun many years ago. We are paying that price now.

I think what needs to be said is, while the GAO has certainly found reason for concern, and we can certainly verify, being on the receiving end of FAA's enforcement and surveillance policies, that there are problems out there, what it does not really do is adequately describe how FAA has come to grips with those problems. It has instituted a number of reforms, very important reforms, that will assure that air carrier inspections will continue to improve, that there will be an adequate work force, an adequate trained work force, and scoped in the way they do their business.

We have consistently, in almost every hearing where we have testified, said that we need better trained and a better deployed inspector work force out there.

We support "more cops on the beat," frankly, because the better FAA's quality of surveillance is, the better overall compliance will be and the more the public will have confidence in air safety.

Thank you for your interest in our comments.

[The statement follows:]

STATEMENT OF ALAN R. STEPHEN, EXECUTIVE VICE PRESIDENT, REGIONAL AIRLINE ASSOCIATION

I am Alan R. Stephen, Executive Vice President of the Regional Airline Association. On behalf of our eighty member air carriers, I appreciate the opportunity to appear here today to comment on S. 2417, a bill that would establish an Aviation Safety Commission.

We welcome the leadership of the Senate Aviation Subcommittee in holding hearings now on this very important subject. In just over fourteen months, the Airport and Airway Improvement Act of 1982 will expire. With it expires the authorization by which vital investments are made in airport development, in air traffic control and air navigation equipment and in safety- and capacity-related research and engineering.

Thus, we have a rather limited period in time by which to address a number of questions foremost on the minds of the air traveling public, the Congress, and of course, those who operate aircraft. First, how do we assure that the Aviation Trust Fund will be used for the purposes intended, and not as a tool of deficit reduction? Second, how should the Federal Aviation Administration be structured to assure that the National Airport and Airway System is operated with maximum safety and efficiency? Finally, does the FAA have adequate resources, particularly air controller and air safety inspector staffing, to meet this nation's long term commitment to aviation safety and air commerce? In our view, S. 2417 is potentially a most timely mechanism, by which such questions can be addressed.

Underlying the establishment of an Aviation Safety Commission is public confidence in the FAA and its ability to adequately surveil a deregulated air carrier industry. This question has been raised before by the Senate Aviation Subcommittee

as recently as last fall, in hearings on October 1st and November 5th. Then as now, the Regional Airline Association welcomes the opportunity to set the regional air carrier safety record straight.

Safety is the highest priority of our industry and it continues to be our most important commitment to the air traveling public. The dramatic improvement in the commuter airline safety record, year after year, is evidence that our commitment is not recent. Over the years since deregulation when Congress directed that commuter airline safety be equal to maximum practical extent to the safety to major airlines, we have taken an aggressive role in addressing the underlying causes of our accidents, through the FAA and through voluntary industry programs.

The simple fact of regional airline operations is that 1985 was the safest year in our history. Indeed, according to National Transportation Safety Board statistics, regional airlines have had a net reduction in accidents in six our of the past seven years. Meanwhile, reginal airlines have grown dramatically in activity. To put this record into perspective, I would like to cite some statistics:

	1978	1985	Percent change
Total regional carriers operating	228	179	−21
Passengers enplaned (millions)	11.3	27.3	+173
Airports served	681	854	+25
Scheduled departures (millions)	1,196	2,756	+38
Total accidents	61	17	−72
Accident rate per 100,000 departures	3.06	0.62	−80

Source: 1986 Regional Airline Industry Annual Report

Airline deregulation envisioned a strong and reliable regional airline industry emerging to fill service voids and to meet the air transportation needs of the small and medium sized communities. That role continues to be more important than ever. We are confident that any "blue ribbon" study of that role will underscore the success regional airlines have had in serving the American public in the post-deregulation environment.

Of foremost priority of the "blue ribbon" commission established by S. 2417, in our view, must be a thorough examination of the mechanism by which our airport and airway system is operated and funded. We share the concerns of the Senate Aviation Subcommittee about how the Aviation Trust Fund balance continues to grow while there continue to be serious unmet funding needs.

The Air Transport Association has initiated a very interesting and innovative proposal to establish a federal corporation to administer certain FAA operations functions. One aspect of this proposal is how FAA's safety related functions should be accomplished. This would be a very appropriate function for the "blue ribbon" commission to study and upon which to make recommendations.

Because the current Aviation Trust Fund authorizing and revenue legislation will expire at the end of 1987, it is important that the Aviation Safety Commission be chartered to complete its work within one year. The Regional Airline Association will give this Commission our fullest attention and priority in responding to its inquiry.

The FAA continues to face extremely tight budgetary constraints that threaten its ability to meet the needs of the air traveling public. We are pleased that both the Congress and the Administration have put priority on achieving the staffing target of 14,480 air traffic controllers by the end of Fiscal Year 1986. It is clear that even more controllers are needed, however. We appreciate the leadership of the Senate Aviation Subcommittee members in supporting a 1987 Budget Resolution that accounts for this additional controller staffing along with setting a realistic overall FAA operations budget.

Finally, a recent report by the General Accounting Office has called attention to FAA's air carrier surveillance program. That report emphasizes many of the very real problems FAA faces today from budget and staffing decisions made several years ago. The Regional Airline Association has long been an advocate for improving FAA's air carrier surveillance program. It may seem strange that our industry would support putting "more cops on the beat." However, air carrier surveillance is as much a quality control function as it is safety enforcement. The more consistent FAA enforcement is, the better overall air carrier compliance will be. FAA surveillance is far from perfect, as the GAO has found. However, the FAA has undertaken

very significant reforms that will assure an adequately trained, allocated and scoped inspector workforce in the future.

Thank you for your interest in the views of the Regional Airline Association. I would be pleased to answer any questions you may have.

Senator KASSEBAUM. Thank you, Mr. Stephen.

Mr. Bolger, it is a pleasure to welcome you for what I believe is your first testimony as president of ATA before this subcommittee.

Mr. BOLGER. Thank you. It is nice to be here.

I, too, will summarize my statement.

I am pleased today to testify on this legislation which could lead to constructive measures, in our opinion, that could enhance aviation safety and capacity.

I would like to discuss some of our thoughts concerning the proposal for the Aviation Safety Commission. It is essential, however, that there be no hiatus in current safety and capacity programs as the commission pursues its work.

I would note briefly that there has been much understandable interest with regard to airline safety. This interest is most proper. Congress has consistently taken strong action to assure that safety would always command paramount consideration.

There must never be any sense of complacency when it comes to safety. The facts demonstrate that airline safety has improved over the years, and I have an attachment, attachment A, to my testimony, that will outline the statistics supporting that.

It is noteworthy that as these hearings are being held, new records are being set in U.S. air transportation. In 1986, more than 400 million passengers will travel aboard U.S. aircraft, exceeding last year's record of 380 million. This traffic is being carried by about 16,000 flights per day.

The primary reason for the growth in air transportation has been public confidence in airline safety. We must do everything possible to assure that this confidence is maintained.

Keeping this in mind, the ATA Board of Directors has developed a safety agenda of priority action items that serves as a work program for the association. This is also an attachment to my testimony.

I believe that the proposed commission could make a significant contribution to focusing public attention on aviation needs and strengthening aviation policy to meet growth requirements.

However, I want to stress again that it is essential that the work of the commission in no way be permitted to impede current FAA improvement actions, for example, in the area of airway and airport capacity. Time is of the essence in organizing the commission and in carrying out its challenging responsibilities.

The Air Transport Association, in its appearances before the commission and in meetings with members and staff, will have numerous recommendations to make.

As members of the committee are aware, ATA has been exploring in great depth a proposal that would transfer FAA air traffic control and airport activities to a new Federal corporation or authority.

In our view, a properly structured Federal corporation can achieve many of the objectives sought in the proposed blue ribbon commission, and at the same time, remove budgetary, personnel

and procurement constraints that hinder air transportation safety and capacity enhancement.

We believe strongly that the work of the blue ribbon commission and the examination of the Federal corporation concept by the administration and the Congress should move along in parallel.

We are pleased that the prestigious National Academy of Public Administration examined the present FAA structure, concluded that there needed to be some changes, and endorsed the concept of a Federal authority as the most viable alternative.

While the academy recommended that FAA functions in their entirety should be transferred to the new authority, I believe the commission's focus on FAA's safety functions could provide valuable insights on whether these functions should be transferred, retained, or perhaps phased in over an extended period of time.

We will urge the commission to examine closely what can be done to enhance safety and capacity of airports and airport facilities.

On a final note, the work of the commission should be completed in less than 1 year. There have been numerous studies that will assist the commission, and we must keep in mind the deadline dates in 1987 for the Airway and Airport Improvement Act and for extension of the Aviation Trust Fund.

The ATA and its member airlines believe a safe, efficient, and timely air transport system is paramount to the economy and in keeping the United States at the leading edge in world competition and leadership.

We stand ready to work with the Congress and the administration on whatever initiatives are necessary to foster those goals.

That completes my summary.

[The statement follows:]

STATEMENT OF WILLIAM F. BOLGER, PRESIDENT, AIR TRANSPORT ASSOCIATION OF AMERICA

I am William F. Bolger, president of the Air Transport Association, whose member airlines account for more than 90 percent of U.S. passenger and cargo air transportation. We are pleased to testify today on legislation that could lead to constructive measures that could enhance aviation safety and capacity.

Our Association this year celebrates its 50th Anniversary. Throughout these five decades of aviation progress, we have supported the work of Congressional committees, task forces and Blue Ribbon Commissions in a continuing examination of actions designed to improve aviation safety and service to the public.

I wish today to discuss some of our thoughts concerning a proposal to establish the Aviation Safety Commission. It is essential, however, that there is no hiatus in current safety and capacity programs as the Commission pursues its work.

It should be noted that previous aviation safety initiatives have enjoyed strong bipartisan support, and that is exactly how it should be. The importance to our nation of the growth of air transportation must not be fettered by partisan considerations.

As we look ahead to the work of a Commission, I would note briefly that there has been much understandable interest with regard to airline safety. This interest is most proper. Congress has consistently taken strong action to assure that safety would always command paramount consideration. There must never be any sense of complacency when it comes to safety. The facts demonstrate that airline safety has improved over the years, as shown in Attachment A. We must all work together to ensure that this trend continues, and we commend this Committee's interest as most important and valuable.

I want to assure you that the ATA member airlines will give 100 percent cooperation to the Commission. Because of its importance, I will be the primary source of

contact for ATA, and our newly appointed Executive Vice President-Operations and Safety, William W. Hoover, who is with me today, will be the alternate.

I noted earlier the ATA is celebrating its 50th Anniversary in 1986. In 1936, our carriers moved one million passengers. It is noteworthy that as these hearings are being held, new records are being set in U.S. air transportation. In 1986, more than 400 million passengers will travel aboard U.S. aircraft, exceeding last year's record of 380 million. This traffic is being carried aboard 16,000 flights a day.

The primary reason for the growth in air transportation has been public confidence in airline safety. We must do everything possible to assure that this confidence is maintained. Keeping this in mind, the ATA Board of Directors has developed a Safety Agenda of priority action items that serves as a work program for the association (See attachment B). ATA has also recently published a booklet about air safety written by noted aviation journalist Robert Serling.

I believe that the proposed Commission could make a significant contribution to focusing public attention on aviation needs and strengthening aviation policy to meet growth requirements.

I want to stress again that it is essential that the work of the Commission in no way be permitted to impede current FAA improvement actions, for example, in the area of airway and airport capacity. It would be counterproductive if the Commission's work slowed down the necessary actions Congress must take because of the expiration of the Airport and Airway Act September 1987. Time is of the essence in organizing the Commission and carrying out its challenging responsibilities.

The Air Transport Association, in its appearance before the Commission and in meetings with members and staff, will have numerous recommendations to make. These recommendations will cover a broad spectrum of technical areas involved in airline operations.

As members of the committee are aware, ATA has been exploring in great depth a proposal that would transfer FAA air traffic control and airport activities to a new federal corporation or authority. In our view, a properly structured federal corporation can achieve many of the objectives sought in the proposed Blue Ribbon Commission, and at the same time remove budgetary, personnel and procurement restraints that hinder air transportation safety and capacity enhancement. We believe strongly that the work of the Blue Ribbon Commission and the examination of the federal corporation concept by the Administration and the Congress should move along in parallel.

In our view, a federal corporation or authority would retain the federal presence and oversight responsibilities in our society that are necessary to assure public confidence in safety and, at the same time, achieve more effective management planning and efficiency. Users will pay for what they get, consistent with existing formulae, but they will get what they pay for from the Aviation Trust Fund.

We are pleased that the prestigious National Academy of Public Administration examined the present FAA structure, concluded that there needs to be change, and endorsed the concept of a federal authority as the most viable alternative. The Academy agreed with us that it was not the fault of dedicated professionals in FAA that there were serious shortcomings; the blame properly was placed on the fundamental structure and financing of FAA. While the academy recommended that FAA functions in their entirety should be transferred to the new authority, I believe the commission's focus on the FAA's safety functions could provide valuable insights on whether these functions should be transferred, retained, or perhaps phased in over an extended time period.

We will urge the Commission to examine closely what can be done to enhance safety and capacity of airports and airport facilities. ATA has made some specific recommendations and we are pleased that a number of them have been implemented by the FAA. But we think more can and should be done, including expansion of ILS capability and new and expanded runways, and optimum use of available facilities.

On a final note, the work of the Commission should be completed in less than one year. There have been numerous studies that will assist the Commission. We must keep in mind the deadline dates in 1987 for the Airway and Airport Improvement Act and for extension of the Aviation Trust Fund.

The Air Transport Association looks forward to the opportunity of assisting the Commission in its vital work. We will be making numerous recommendations and will be presenting to the Commission our full analysis and action program regarding the air traffic control and airport authority.

It is my understanding that the Subcommittee is also interested in hearing our views regarding air traffic control system matters and FAA inspection and surveillance issues.

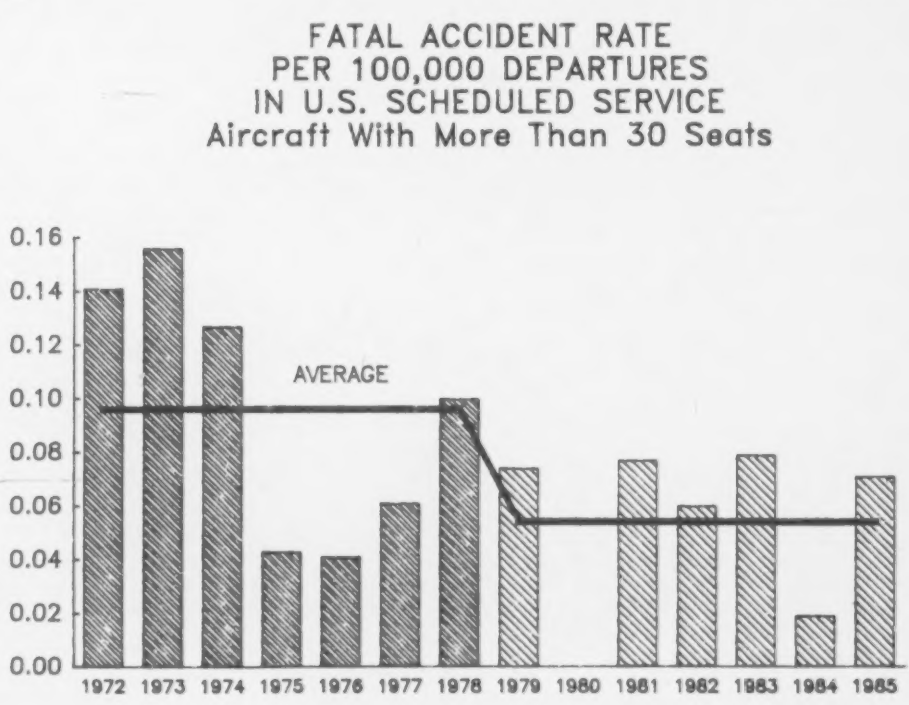
I mentioned earlier the ATA Safety Agenda. As you can see, the very first item on our list of priority safety actions is one to reduce the risk of mid-air collisions. We are seeking expanded use of altitude-encoding transponders as well as effective collision-avoidance systems.

I am sure that our thoughts on the controller workforce are well known to this Subcommittee. We continue to believe that additional highly trained controllers are needed to handle future air traffic growth, especially in light of unfortunate delays in the modernization of air traffic control equipment.

With regard to the FAA's aircraft inspection program, we have always felt that the FAA should be given the resources it feels it needs to carry out this important surveillance work. Airlines will, of course, continue to be fully responsible for the continued safety and airworthiness of their airplanes, regardless of FAA inspection activity.

The ATA and its member airlines believe a safe, efficient, and timely air transport system is paramount to the economy and in keeping the United States at the leading edge in world competition and leadership. We stand ready to work with the Congress and the Administration on whatever initiatives are necessary to foster those goals.

ATTACHMENT A



ATTACHMENT B

ATA Safety Agenda for 1986

The safety agenda is intended as a priority ATA work program to be accomplished through the various technical committees under the direction of their governing councils. The agenda is also intended for use with the Executive Branch, Congress, and the public as an indication of the airline industry's continuing emphasis on the paramount importance of safety in all matters affecting the industry.

INTRODUCTION

The ATA member airlines have historically played a leading role in pursuing improvements in safety for the traveling and shipping public—improvements in such areas as aircraft design and equipment, operating and maintenance procedures, security, and air crew training methods. Since its formation 50 years ago, the Air Transport Association and it many technical committees have emphasized the importance of safety above all else. The current list of industry objectives obliges ATA "to conduct the affairs of the Association in keeping with the primacy of the airline industry's commitment to safety". The safety agenda for 1986 identifies further areas where continuing progress is believed to be achievable.

The emphasis upon safety since the inception of commercial flight has produced remarkable results. Airline travel is the safest mode of transportation. Since deregulation of the airline in 1978, the safety record has continued to improve and in fact to surpass the already excellent record of the prederegulation years. During a 30-month period since deregulation, ATA airlines operated without a single passenger fatality. There have been only two fatal accidents—two too many—in the past 42 months of ATA jet passenger flights.

The superb safety record is the result of the personnel and financial resources the industry devotes to safety. Advanced and sophisticated training techniques assure the highest standards of professionalism among carrier flight crews. Detailed maintenance procedures and advanced monitoring systems are employed to assure the safety of the aircraft and its many systems. The ATA airlines spend more than $4 billion a year on fleet maintenance and employ some 45,000 highly skilled technicians to maintain the 3,000 aircraft in the ATA fleet.

While the Federal Aviation Administration (FAA) is responsible for the regulation of safety, it is the individual carrier that bears the ultimate responsibility for safe operation of its aircraft. In this regard, the air carriers benefit from the contributions of the manufacturing industry, first through the availability of reliable, efficient equipment, and secondly through continuous contact and coordination in the service life of the aircraft and its inflight systems. The maintenance techniques and surveillance methods developed by the ATA airlines, in cooperation with the FAA and the manufacturers, have become models for the airlines of the world and the Air Force and Navy.

Safety and security are related matters, and thus the ATA safety agenda addresses opportunities for strengthening the industry's already extensive security procedures. These measures have been highly effective in deterring hijacking of aircraft, and have been carried out in ways that do not unduly burden the passenger or adversely affect the high degree of efficiency needed in airline operations. The advent of terrorism in recent years poses new and difficult challenges for the government, airports, and the airline industry. The safety agenda for 1986 emphasizes several areas where new measures may be needed to safeguard against the terrorist threat.

SAFETY IN FLIGHT

Reduce risk of mid-air collision; Seek expanded use of altitude encoding transponders; and Press for effective collision-avoidance systems.

Reduce wind-shear risk: Promote improved ground and airborne detection equipment; and Improve flight procedures and ensure widespread training.

SAFETY IN THE CABIN

Promote industry-developed standards for safer cabin interior materials.

Investigate proposals for increased seat safety and protective breathing equipment to determine basis for industry recommendations.

Install new emergency escape path lighting systems.

Investigate improved means for communicating safety information to passengers.

Reemphasize enforcement of FAA regulations on carry-on baggage.

HUMAN FACTORS ROLE IN ACCIDENT PREVENTION

Reemphasize importance of human factors considerations in preventing accidents.

Establish a priority work program for industry and government agencies focusing on the most beneficial research and application programs.

Support adequate federal funding for needed research programs.

PROMOTING A DRUG-FREE WORK ENVIRONMENT

Identify any desired or needed regulatory measures.

Adopt industry-wide or individual carrier programs.

STRENGTHENING FAA INDUSTRY SECURITY AND ANTI-TERRORISM MEASURES

Accelerate development of improved explosive detection techniques and conduct operational tests to determine effectiveness and efficiency.

Evaluate automated techniques for achieving positive passenger/baggage match.

Improve passenger screening process by: Better human/machine interface; Emphasis on high risk locations; Restricted access at selected facilities; Automated use of special profiles; and

Secure authority for industry access to needed information to permit additional personnel background checks.

With FAA, reexamine objectives and strengthen quality of security training programs for flight and ground personnel.

Develop concepts for increasing airport security if circumstances require.

INCREASE PUBLIC AWARENESS OF AIRLINE SAFETY PROGRAMS AND ACCOMPLISHMENTS

Individual airline efforts.

ATA coordinate industry-wide efforts.

Senator KASSEBAUM. Thank you very much, Mr. Bolger.

Mr. Baker.

Mr. BAKER. Thank you, Madam Chairman.

I also will summarize, much to your relief, I am sure.

We are relatively benign regarding the commission. I do share your concern as to the makeup of the commission.

I do not believe that anything would be served by another study by a group of well meaning amateurs. We have plenty of dialog going on in the industry at this time, and all it would do is add confusing tones.

We also have, as has been mentioned, the Airport and Airway Act coming up for revalidation, with hearings to start this fall. So there is going to be a broad public dialog on this.

I also believe that the proliferation of studies and inspections and so forth of the FAA have tended to divert them away from their job, which is running the air traffic system, rather than responding to inquiries.

A question was asked regarding the inconsistency between safety and promotion in the FAA's charter. I think the two are intertwined to the point where they cannot be pulled apart. Safety is the best promotion for aviation.

Indeed, if I have a complaint, it would be that there is too little, rather than too much, promotion being done at the FAA, particularly in the airport area. If we do not get additional airport capacity, and we need national leadership to get it done, the traffic problems, which are compounding the inefficiencies in aviation, are going to continue to grow.

I think we are looking for real progress. The proposal which we made recently—and I was pleasantly surprised to hear Senator Lautenberg endorse it—which is to reestablish the FAA as an independent agency without the overburdening bureaucrats at DOT, would probably be the single, largest step forward in that direction.

We would urge the committee to take a hard look at that.

The other point, on which I think there is unanimity, which is unique in the aviation community, obviously is that the money collected from the users should be spent for the purposes for which it has been taken from them. We perceive that there has been a major breach of faith by this administration and by preceding ad-

ministrations regarding the handling of the trust fund moneys. It is being reflected in inefficiencies in the air traffic system.

Regarding safety, I think the consensus, again, in the industry is that yes, we have problems, but that the air traffic system is basically safe. I don't think anyone would stand up and say it is efficient, however. We are paying a terrible national price for the inability of this air traffic system to grow to accommodate demand.

We think that this is borne out by the recent threat by the Administrator to further constrain traffic. As I say, this is a price we are paying nationally in terms of both users, from loss of utility, and the cost to the traveling public as a result of lack of capacity in the air traffic system.

The near-miss data I think is an inappropriate area for the study of this proposed commission. It has been studied by everybody in the world who is knowledgeable that there is such a set of data. I think the FAA's bookkeeping methods have been criticized, but that they have, indeed, committed that they are going to clean up their act and get the data handled in a more timely fashion.

Near misses do not necessarily equate with hits. Indeed, we can demonstrate statistically that traffic volume has gone up and midair collisions have gone down.

The aviation industry last year had a darn good year, not an unsafe year. General aviation and the commuters had the best safety year we have had in our history. There was a continuation from a very good safety base from the preceding years.

I think the air carrier industry has been blasted unfairly because if you pull the international accidents out, over which neither the FAA nor U.S. carriers had any control, you would find it was no worse than an average year.

I think the important point in that regard is that the air traffic system was not blamed for any of the air carrier accidents, in the sense at least of the dialog which has gone on here.

As an aside, regarding Senator Byrd's concern about the law of gravity, I am comfortable, even if this study goes forward, that the Congress will not repeal it.

Senator KASSEBAUM. The law of gravity?

Mr. BAKER. Yes, ma'am. In fact, there may be some hope. I have heard that the FAA is running a study now that may challenge Newton and push the theory that the Earth sucks.

There are other areas that I think need some discussion because they were discussed in great detail this morning. One has to do with the inspection side of the FAA.

What we are doing here is reaping a harvest that has been sown over the last 20 years.

I was in the FAA at the time the assault on the inspector force of the FAA began. It was because primarily of the major public concern about air traffic and the deemphasis of the flight standard side of the FAA.

I participated in a number of battles with the Office of Management and Budget, trying to stop the deterioration in the inspector force. This has continued up to this day. To blame the current administration for that particular problem is unfair, as far as I am concerned.

It is exactly the result of poor decisions made years ago. For them to get back up to speed, is going to take some time, because they are simply short of qualified inspectors, and you cannot go out and find them on the street.

I think the dialog regarding criteria is important in that area.

The civil service system also impacts on that, because there are certain biases in terms of who they can hire for inspectors.

The response of the FAA in recent years, which has compounded confusion by consolidating GADO's, general aviation district offices, and ACDO's, the air carrier district offices, and the FSDO's, is a class acronym game, which means that we don't have enough people, so put all that we have left into fewer places. This is exactly what they have done.

This has impacted on the ability of the inspector to monitor the people for whom he has responsibility.

The DOT's safety audit was another issue that was raised. I personally find that offensive from a user's perspective, simply because it was a PR effort which was terribly disruptive to the regular inspection processes which the FAA had scheduled.

In speaking with the various regional directors, particularly in the FAA, they all came up with that comment, that it destroyed the year's scheduling on inspections for near-term PR benefit. I think that this, in and of itself, is a strong argument to pull FAA out from under DOT, since DOT, for reasons unrelated to safety or efficiency, tends to reschedule their priorities on short notice oftentimes.

Regarding the NTSB recommendations, I subscribe to what Ms. Goldman said. From the user's perspective, clearly the NTSB recommendations cannot be made mandatory. They lack the expertise from the user's perspective, and the user would be denied his imput into the actions of the FAA.

We would find that terribly offensive.

Beyond those, I have no thoughts on this.

Thank you.

[The statement follows:]

STATEMENT OF JOHN L. BAKER, PRESIDENT, AIRCRAFT OWNERS & PILOTS ASSOCIATION

Madam Chairman, I am John L. Baker, President of the Aircraft Owners and Pilots Association (AOPA). I appreciate the opportunity to present comments on Senator Robert Byrd's proposal to establish an aviation safety commission, S. 2417, and to discuss general aviation's views on aviation safety in the air traffic control system.

AVIATION SAFETY AND SENATOR BYRD'S PROPOSED COMMISSION

General aviation in this country is composed of more than 700,000 pilots flying a civil fleet of more than 200,000 aircraft approximately 35 million hours a year. By comparison, U.S. air carriers operate only 4,370 aircraft and fly just 20% of the hours general aviation does on an annual basis. Together, the carriers and general aviation conducted more than 60 million flights last year.

Significantly, the NTSB reports that general aviation had its safest year ever. General aviation's contribution has been a consistent downward accident trend with the lowest rate ever in 1985 and indications of further improvement in 1986.

Clearly, however, we are not satisfied. All of us in aviation continue our aggressive efforts to further reduce the possibility of aviation accidents.

S. 2147 may be one approach to finding solutions to problems which inhibit the Federal Aviation Administration's effectiveness. We congratulate Senator Byrd and other supporters of this bill for their interest and willingness to take action. At the

same time, we are compelled to suggest that significant improvements in FAA's ability to meet both its "safety" and "support commercial aviation" roles will probably not be obtained by a commission review conducted within the constraints of S. 2417.

FAA responsibilities for safety and promotion of commercial aviation are not as contradictory as language in the bill implies. Despite its often apparent inability to bring important safety and system efficiency programs to fruition, it is more often interference from within the Executive Branch than economic or political pressure from commercial segments of aviation which renders FAA impotent.

There is no doubt about aviation industry concern regarding the efficacy of an FAA buried under the weight of DOT leadership which consistently seeks to micromanage aviation activities it is ill-equippped to understand and which are the clear responsibility of the FAA. The Air Transport Association (ATA) "Federal Corporation" proposal, though not widely supported, reflects both this concern and aviation industry frustration with bureaucratic inertia and political agendas originating primarily within the DOT!

The FAA has become a subset of the Office of the Secretary of Transportation (OST) staff instead of exercising the broad powers given it by Congress in the Federal Aviation Act of 1958. It should be given greater autonomy to manage its own planning, operations and finances.

A first step in this direction? Remove the FAA from the oversight of the Department of Transportation (DoT) and make it once again an independent agency. The second step is to ensure that the aviation trust fund is expended for its intended purpose, funding capital improvements in America's national airspace system.

We are also concerned about the composition of the commission as described by the present legislation. Certainly there is wisdom in constructing the commission so as to protect it from early bias, but it is difficult to reconcile the monumental task it faces with the obvious deficiency in aviation expertise created by exclusion of aviation industry professionals from the commission in favor of "non-aviation corporate managers and labor officials."

We are convinced that such a commission will not have the expertise to best analyze the nation's aviation system or the role of the FAA, particularly in view of the commission's relatively short life. In fact, such a cursory activity has the potential to produce real harm through recommendations based on incomplete understanding!

AIR TRAFFIC CONTROL

The air traffic control system is safe. Though AOPA often takes FAA programs and responsiveness to task, we are firmly convinced that the FAA maintains a "safety first" attitude. They deserve much credit for operation of an airspace system which sets the world safety standard. Obviously, additional ATC controllers are needed, and continued funding is necessary for programs of the National Airspace System Plan which will pay the biggest safety dividends. AOPA will continue to speak in support of completing such programs as FSS automation, DUAT, AWOS, Mode S ground equipment, but will loudly oppose MLS, Mode S avionics, FSS consolidation and other low return programs.

AIRSPACE

Our *airspace* is specially structured to provide the required degree of control and safety as a function of type and level of activity involved. Increasing the level of control in airspace greatly increases ATC workload and also inhibits access to that airspace. Increased control does not mean increased safety.

NEAR MIDAIR COLLISIONS

Of all modes of transportation, only aviation has a government agency (FAA) and an industry dedicated enough to track and analyze near collisions as if they were catastrophic, fatal events. Such analysis is necessary to future safety and efficiency planning but should not become the basis for over-reaction or emotional rulemaking.

The current definition of a near midair collision is broad and includes critical near midairs as well as a recording of instances involving less than "standard" aircraft separation. The "standard" separation provided by air traffic control establishes wide margins for safety. Therefore, the large percentage of near midairs which are due to less than standard separation are not critical events.

Certainly there are more "near misses" in highway transportation each week than there have been in years of aviation transportation. There are so few actual

midairs annually that their number is statistically insignificant. There is no correlation between reported near midair collision statistics and actual midair collisions.

The FAA's latest Near Midair Collision (NMAC) data for 1983-85 is largely composed of voluntary reports submitted by pilots. A near midair collision is defined as an incident in which a possibility of collision between two or more aircraft occurs as a result of proximity of less than 500 feet, or a report is received from a pilot or flight crewmember stating that a collision hazard existed. These reports are entirely subjective! Of a total of 2,935 aviation accidents in 1985, only 14 accidents (or one-half of 1%) involved fatal midair collisions.

Even the unfortunate accident statistics generated by the air carriers in 1985 reflect a high level of safety and were not attributed to ATC system failures.

While the number of *reported* NMAC's is on the increase, this is due to increased reporting by the pilot community and does not indicate an actual increase in the number of events or a lessening of air traffic system safety.

It has been reported that general aviation is involved in 82 percent of all the recently-studied NMAC's. However, what is not reported is that general aviation comprises 98 percent of the aircraft fleet and conducts 90 percent of the flights. Therefore, general aviation's proportion of involvement in NMAC's is far less than would be expected, based on traditional exposure data and its proportion of the aircraft fleet.

The general aviation community regularly participates in hundreds of safety seminars where see-and avoid methods are emphasized. AOPA endorses such training, and the AOPA Air Safety Foundation has worked with the FAA to produce and make available such slide-tape shows as "Take Two and See" for use in such seminars.

The trade press regularly includes articles on the subject of collision avoidance, where military operations and scanning techniques predominate. The AOPA Pilot magazine and AOPA Newsletter incorporate articles of this nature on a recurring basis.

All of these activities create an awareness in the pilot population concerning midair collisions. This is essential because one of the greatest problems concerning midair collisions is complacency. The failure to maintain a constant lookout stems, at least partially, from a false feeling of security when in contact, wtih ATC, especially when in radar contact, and is encouraged by in-cockpit workload.

AIRCRAFT INSPECTION PROGRAM

We question DOT's high-handed mandate that FAA should invest vital resources in what may have been no more than a show for the public or public relations for DOT. There is no way to assess the impact such capricious reordering of FAA activities might have on more rational management practices.

AOPA has been supportive of the FAA's conduct of the general aviation segment of the safety audit. While we had concerns over the focus and conduct of the inspections in the beginning, the audit showed in excess of 90 percent compliance with the regulations, and AOPA received few complaints from pilots concerning unprofessional FAA actions.

Despite being a DOT intrusion on FAA's prerogatives, we find that the inspection program avoided nitpicking and minor deficiencies which had no bearing on the safe conduct of flight and generally focused on areas that might improve flight safety. Documented areas of improvement will enhance general aviation activity that has already demonstrated its dedication to flight safety and amassed an excellent safety record. We will continue this support as long as the effort does not degenerate into harassment.

CONCLUSION

Senator Byrd's proposed commission is certainly a well-intentioned initiative that clearly demonstrates Congressional interest in aviation safety. While we are not convinced that such a commission will produce dramatic results, we appreciate the spirit in which it was put forward.

If such a commission should be established, AOPA encourages you to include appropriate members to provide aviation expertise, reflecting the perspective of the users of the system.

In any case, this committee should consider that:

It is time to remove the FAA from under the DOT umbrella and to permit it to better serve the unique needs of aviation!

Safety, technical and regulatory issues can be more responsively addressed only if FAA functions as aviation policymaker without layers of DOT bureaucracy!

The FAA will be more sensitive to the legitimate concerns of the public, aviation system users, and the Congress, if the DOT's muzzle is removed!

An independent FAA, provided with adequate funding, might obviate the need for the commission proposed by S.2417.

The safety audit substantiated overall general aviation safety but provided evidence of DOT interference in inherent FAA responsibility.

The FAA's air traffic control system is the yardstick with which the world measures aviation safety. America's system is safe!

Again, thank you for permitting this opportunity to present our views on these important safety issues.

Senator KASSEBAUM. Thank you. Those are pithy thoughts and we appreciate them.

Mr. Bolger, I would like to start with you because, obviously, the idea of a Federal corporation is something that intrigues everyone.

I would like to start by asking you how, for instance, a Federal corporation would solve the controller staffing problem.

Mr. BOLGER. In a couple of ways, Senator.

First of all, it would provide new incentives for employees that are not possible through the regular Federal personnel establishment.

Senator KASSEBAUM. For instance?

Mr. BOLGER. You could look at the compensation efforts; you could look at the retirement plan; you could look at the scheduling of people; you could be looking at relocation into high traffic areas, where it is difficult to get people to volunteer to go. Into New York City for instance, to work in the center there; and with the proper incentives, outside of OPM, you could possibly get them to do that. That type of activity would be possible.

I think the greatest benefit would be to let the air traffic control system be modernized on a long-range planning basis, and not be subject to the possibilities of when you make your long range plan, to put in that system and have it completed by 5 to 7 years, and then to have the budgetary process in any given year destroy that attempt to carry out that long-range plan.

Senator KASSEBAUM. I believe there is additional compensation now, is there not, for moves to high density areas?

Mr. BOLGER. Well, there are. But it is without the compensation that you usually find in the private sector—taking real estate problems off people's hands, and making sure that their total real estate transaction is paid for so that you do not pick up an additional financial burden for your family's financial matters.

Senator KASSEBAUM. Wouldn't a Federal corporation still be working with limited resources? You essentially will have the money in the Aviation Trust Fund, will you not?

Mr. BOLGER. Yes. Basically what we are recommending and will be recommending is for the first 2 years at least of this authority, that the funding come at about the same tax rate on users' fees, at the same rate that we are getting it today, such as the 8-percent ticket tax, the fuel taxes for general aviation, and the cargo taxes.

But we think, of course, that the fund being held in reserve is really to hide a part of the Federal deficit. It is not being used for the intended purposes. It does not need an increase in the sources for funding. It just needs to be properly utilized to carry out its intended purposes, to pay for improvements in aviation, such as airport capacity.

Senator KASSEBAUM. I certainly agree with that.

I have legislation that would remove the Aviation Trust Fund from the budget. I personally still believe that is a better way to go.

Mr. BOLGER. Well, you can remove it from the budget, but you are still subject to the budgetary process each year, and you are still subject to the partisan politics that are involved in it from time to time. The independent Federal authority would be run by the people who are responsible to enhance aviation opportunities.

Senator KASSEBAUM. To be realistic about it, I am not sure that Members of Congress are going to be eager to relinquish control over such a large pot of money.

Mr. BOLGER. Well, they should not relinquish control of it at all.

Senator KASSEBAUM. They will certainly want a say in how it is spent.

Mr. BOLGER. Well, I think that with oversight responsibilities, they can. It is money being paid by the consumer directly for these purposes. It is not a tax that is supposed to be used for general purposes. It is directed for these purposes. The unfortunate part is that the people keep paying this tax and it is never used properly.

Something has to be done about it. We are subscribing to the thought that an independent Federal authority, subject to a comprehensive review by the Congress of the United States, our elected representatives, that nobody should ever be turned loose without that type of responsibility back to the elected representatives, is a better way to go, a cleaner, clearer way to go.

Senator KASSEBAUM. Well, it is, of course, used for the purposes designated in the legislation. It is just a fight every year to get the level of authorized funding appropriated.

Mr. BOLGER. By the end of this fiscal year, there will be a surplus of about $4.2 billion there that has been collected for these purposes that are not going to be authorized and spent for these purposes. The latest GAO report on the Aviation Trust Fund said that by the year 1990, if the current level of spending is continued, there will be a surplus of about $12 billion in the Aviation Trust Fund.

Senator KASSEBAUM. Back to controller staffing, there are witnesses testifying today who would support selective rehiring of the PATCO strikers.

Would you support that?

Mr. BOLGER. No, ma'am.

The law does not support it. I think we keep dancing around the legal issue on that. We keep the emotional thing of rehiring the air traffic controllers who illegally went on strike. The law does not allow that right now and probably should not.

If there is anything that needs to be changed, it is that law itself. It is not an issue just surrounding the air traffic controllers situation.

Senator KASSEBAUM. I would make just one last observation, which may be somewhat unfair, concerning the Federal corporation.

You are responsible for moving this initiative forward for ATA. Are you drawing on past experience as Postmaster General?

Mr. BOLGER. Yes, ma'am.

Senator KASSEBAUM. And I assume that some of the errors of the Postal Service perhaps could guide you as far as making improvements as we privatize?

Mr. BOLGER. Surely. I learned while I was there. There were errors made, and I made some of the errors myself. I certainly draw on that past experience.

Sometimes we confuse a principle, a system, with the people who are running it. You should not confuse that at all.

The system of that independent authority is right. If people that are involved are making mistakes, they should be removed, and you should get other people who won't make these mistakes.

I think sometimes we have the tendency to confuse the system with the people who are running it.

Senator KASSEBAUM. Thank you.

Mr. Baker, you commented on your support for FAA being an independent agency.

Mr. BAKER. Yes, ma'am.

Senator KASSEBAUM. I am sure that, as frustrating as it may sometimes be to all of us to work with and through the support of FAA, it is equally frustrating for them.

I wonder whether you feel that there would be any improvement since they are still going to have to answer to a number of committees up here.

Mr. BAKER. I don't find it at all offensive, Senator. In fact, I think it is a very healthy situation.

I just believe that the agency should be able to respond with candor, and have immediately at its hands the ability to address the problems that this committee or any other committee bring, or that the users bring to them. I think currently that is not the case. They are being micromanaged oftentimes by well-meaning, unqualified people, who simply know nothing about aviation.

This does not seem to me to be in the best interest of the Nation.

I think the impact, having been on practically all sides of this—either because I have had an interesting career or can't hold a job—the impact on the morale within the FAA is demonstrably severe.

I was there during the transition between an independent agency status, where it went from an agency with the kind of morale that traditionally has been associated with NASA to one that now more closely approximates that of the Department of Agriculture. That is the ugliest thing I can say, next to what you just said to Mr. Bolger about the post office.

I just think that the lack of the initiative in the case of the Administrator and the immediate executive people responsible in the agency is, in part at least, in response to the fact that they are held under very tight reign by the Department of Transportation. That indeed is a fact, and all of us who work with them see it.

Senator KASSEBAUM. Thank you.

Mr. Stephen, I have no real questions for you. I just want to commend the regional airlines for their best year in safety. I think it is an extraordinary record, considering the growth and expansion of the regional airlines.

Senator Exon, do you have any questions?

Senator EXON. Madam Chairman, thank you very much.

Gentlemen, I will be brief. There are just a couple of questions that I would like to explore with you briefly.

Would each of you, in as few words as possible, tell me whether or not you share the general concerns that have been raised here this morning. I am assuming that you were here when Senator Byrd made his presentation. Do you share the concerns of some of us that are not being critical of FAA?

Mr. Baker, I know where you are coming from when you say that possibly this bill would cause some morale problems. I don't think it necessarily should.

I am coming at this from the proposition that the Federal Aviation Administration has been under severe pressure, it seems to me, with the combination of deregulation, which has compounded their problem, and the comptrollers' strike and the firing of those thousands of people. So this could not have come at a worst time from the standpoint of smoothing and working this thing out.

I would like to send a message for whatever it is worth to the FAA people, who we think are good and dedicated people. But we have some legitimate concerns with the workload that they now have about whether or not they have had an adequate chance to do the things that maybe they would like to do.

My question of each of you is this. Do you share the concerns, the sort of gut feeling, if you will, that some of us have with regard to the system today and whether it is as safe as it should be, particularly with the complications of deregulation that we have?

You are all intimately involved in the business.

I am concerned. Are you?

Mr. Baker. I would like to respond, Senator, to one part.

I would hate to think that Corn Huskers can't understand each other.

The comment on morale had to do with the impact of the Department of Transportation and not the study.

Senator Exon. OK.

Mr. Baker. Our posture on the study is somewhat benign. We just believe that probably the FAA has been studied to the point where it has impacted on their ability to do their job.

They quoted statistics that there were 241 congressional oversight hearings in the past recent period, and, in addition, I think GAO has had essentially the same number. So they have had one every half a day or so over the past year. This is in addition to the fact that we are coming up on the renewal, in 1987, of the Airport and Airways Facilities Act, which will occasion hearings this fall; plus the fact that these committees—your and the one in the House—do an outstanding job of surveiling the FAA on a day in and day out basis. I don't believe that much would be added by this other than more public dialog, which will not necessarily be good.

Regarding the root question, we have concerns about the system because the system clearly lacks the capacity to handle demand. Clearly, they have had the plague of locusts in the sense that everything bad that could happen has happened over the last 5 years in terms of a growing air traffic system that will meet public demand.

The budgetary constraints, the PATCO strike, all have been compounding problems. We have had transient management in the

FAA, which has compounded the problem. We are in the middle of a major modernization program which is not going at all well. There is a serious question, at least in our minds, as to whether or not they have the competence to handle one of that magnitude.

Cumulatively, these problems raise serious questions for the long-term prospects. In the near-term, we have a terribly inefficient system, which I think we believe is safe.

Senator EXON. Mr. Bolger?

Mr. BOLGER. We believe the system is safe, and probably that the FAA has overcome a lot of obstacles that were put into their path to keep the system safe.

What happens is that to keep it safe, there are delays, and that is a costly factor in itself. We have had people estimate that at one time for the aviation industry, or for the airlines, about $1.5 billion a year is the cost of these delays, as well as the endless other costs to the people who have to experience the delays as passengers.

But it is safe. Of course, if you have one accident a year, or one accident in 5 years, it can be improved.

We think that what has happened is that the FAA has not been allowed to go forward, to get things done to modernize the air traffic control system and to provide for the future. We are seeing growth in commercial aviation of about 4.7 to 6 percent a year. This is going to continue.

The American public wants to fly. Next to the automobile, more people are transported by airplane, whether we are talking about general aviation, regional, or large commercial airlines.

It is necessary to make sure that the capacity, that the safe capacity of aviation is assured for the future by letting the FAA go forward, by getting the things that they need, such as improved airports, improved ways to determine what the weather factors are going to be, whether a flight can come into an airport or not, and to make sure that the air traffic control system is not only properly staffed, but has the most modern equipment available to make sure that they can control the traffic properly and safely.

Senator EXON. Mr. Bolger, before I ask Mr. Stephen to continue, let me ask this question of you.

When you say that it is safe, I think it is safe, too. But safe is a relative term.

Do you feel that, given the number of airplanes that are in the air today, the system is as safe as it was in 1978?

Mr. BOLGER. Yes, I believe so. But we have incurred these delays to keep it safe. I think that is basically what is going on.

The FAA has made sure, and continues to try to assure, that it is a safe system. But we have paid a price for it because we have not always had timely flights, and we should be having timely flights.

Senator EXON. I, like all of you, have been trapped for an hour and a half inside an airplane—it seems like at National Airport all the time.

While I am sitting there fuming, I am yet kind of relieved that we have a system that keeps me on the ground, with my other passengers, and the pilots who say that the safety factor does not allow for you to go up now.

I salute them for that. I think that is good.

Could we improve the safety of the air traffic control system in some manner so that we would not experience the delays we are having now? I guess that is part of what I am talking about.

Mr. Stephen, do you have a comment?

Mr. BOLGER. If I may first speak, I would just answer that yes. We already have state-of-the-art technology to do it if somebody would properly spend the money for it.

Senator EXON. Thank you.

Mr. Stephen?

Mr. STEPHEN. I guess I could do what you might say—yes and no.

I do not share some of the statements that were said this morning and I do share some that have been said. I do agree 100 percent with Mr. Baker and Mr. Bolger that the system is safe. I believe it is safer than ever and I think the record proves that.

I was more concerned 5 years ago, when the FAA was attempting to respond to deregulation by creating regulation by objective, rather than strengthening the inspector workforce and strengthing the regulatory basis. I think Admiral Engen has done a tremendous job, and so has Tony Broderick, in identifying and putting into place a lot of solutions to problems that are going to pay off big benefits, while not today, but tomorrow and in the future.

I just might add that there are 10,000 people less authorized at FAA today than there were 10 years ago. There are 3,000 less controllers, because of the controllers' strike. There are a total of 10,000 people less.

We are asking the FAA to do more with less. I think the No. 1 concern has got to be budgetary.

I am appalled that we are going to see approximately only $140 million spent on aeronautical research and engineering this year when we know that we have a recurring problem of hazardous weather. We should be spending every dime that we can to promote safety.

So, the No. 1 issue is budget. We have a need. We can identify how to spend the money properly. And we can get on it and do some real safety benefits that way.

Senator EXON. Since we have need for some of this money, and since more people are travelling now than ever before, would you object to some kind of per ticket fee for those who use these facilities the most, to pay for it?

Mr. STEPHEN. We have $4 billion approximately in the Aviation Trust Fund. If we need more money, there is the place to get it.

Senator EXON. That is the place to get it.

But, it follows on then, that if that is not enough, we might look to another source?

Mr. BOLGER. Well, the fees are there already. There is a 8 percent ticket tax, a 5 percent tax per cargo shipment.

Senator EXON. I am familiar with that. I was talking about in addition to those, Mr. Bolger.

Mr. BOLGER. I don't think they need any in addition. I think they need to have the Fund properly used.

Senator EXON. You don't need additional now, then.

Thank you very much, gentlemen.

Senator KASSEBAUM. Thank you all very much.

I would now ask panel three to come forward. We will hear now from Captain Duffy, Howard Johannssen, Mr. Thornton, and Mr. Gallipault. I would ask Mr. Gallipault to join this panel. I would appreciate that.

Captain Duffy, do you have to leave?

Mr. DUFFY. Yes, Madam Chairman.

Senator KASSEBAUM. All right.

It is a pleasure to welcome this panel. We appreciate your patience. You have had the time to analyze everybody's comments. Of course, that always gives you a better ability perhaps to address all of the concerns that have been raised.

It is now a pleasure to welcome Captain Henry Duffy, president of the Air Line Pilots Association; Mr. Howard Johannssen, president of the Professional Airway Systems Specialists; Mr. John Thornton, national coordinator, National Air Traffic Control Association; and Mr. John Galipault, who is director of the Aviation Safety Institute.

It is a pleasure to welcome all of you.

I would like to ask please if Captain Duffy could go ahead. He has waited and has a plane to catch.

I wonder if we could first hear his statement and ask him our questions.

Then you can feel free to leave, if you have to.

STATEMENTS OF HENRY A. DUFFY, PRESIDENT, AIR LINE PILOTS ASSOCIATION; HOWARD E. JOHANNSSEN, PRESIDENT, PROFESSIONAL AIRWAY SYSTEMS SPECIALISTS; JOHN F. THORNTON, NATIONAL COORDINATOR, NATIONAL AIR TRAFFIC CONTROL ASSOCIATION; AND JOHN B. GALIPAULT, DIRECTOR, AVIATION SAFETY INSTITUTE

Mr. DUFFY. Thank you, Madam Chairman.

I will introduce a shortened version here on behalf of the 39,000 pilots that ALPA represents on 46 airlines.

The Air Line Pilots Association strongly supports the establishment of an Aviation Safety Commission, as proposed in S. 2417, introduced by Senator Byrd, and cosponsored by you and other distinguished Members of the Senate. We believe the establishment of such a commission to study the organization and functions of the FAA would be most appropriate considering the dramatic changes that have occurred in the U.S. aviation and air transportation industry during this past decade.

It is the opinion of the Air Line Pilots Association that for a number of reasons the FAA has not been provided with the resources necessary to carry out the basic safety mandate. This has led to the establishment of priorities, based on inadequate funding levels, which have not in all cases been in the best public interest from a safety perspective.

There is a growing frustration in the industry over a perceived inability of the FAA to respond to user requirements in a deregulated environment in a timely manner. Much controversy is evident over the Aviation Trust Fund, as well as the dual responsibility of the FAA to promote and regulate aviation.

This has prompted industry proposals for dramatic changes, such as the formulation of a Federal corporation to assume the responsibilities and functions of the FAA, as Mr. Bolger just talked about.

Deregulation has certainly produced a new mode of operation for our industry.

It can be argued most effectively that the FAA has not adapted to this new mode of operation. In fact, several recommendations have been presented in testimony provided at both Senate and House hearings examining the impact of deregulation on our industry, which were intended to provide FAA with the ability to respond to the challenges of deregulation. Few, if any, of those have been implemented.

These and other subjects are identified in section 3 of the proposed legislation, under "Functions of the commission." Aviation safety would most certainly be enhanced by an examination of these issues, and, where appropriate, the publication of recommendations concerning the organizational approach to insure safety and measures to improve the enforcement of Federal regulations relating to aviation safety.

Madam Chairman, we would like, however, to make a suggestion that we believe would enhance the work of the commission.

As stated under section 2(b)(1), the bill would require that the commission be composed of Presidential appointees who "possess extensive experience and expertise at the highest executive levels of corporate management."

We believe that if such a commission is to perform the functions outlined in the bill, then the commission's staff personnel should possess extensive expertise in aviation matters, including aviation safety with pilot experience. This can be accomplished under section 4(b)(1)(A) and (B) of the proposed legislation.

On the ATC system, since the PATCO strike in 1981, our message has been consistent. The air traffic control system is safe. However, we are concerned over what appears to be general reductions in the inherent margins of safety.

This concern has been developed as a result of reports received from pilots operating in the system, and we are, in effect, constantly monitoring the ATC system.

In addition to the special monitoring that we conducted during the PATCO strike, we have also reviewed the professional studies of the air traffic control system conducted by the Government Accounting Office, the National Transportation Safety Board, the Jones committee, and the Flight Safety Foundation during these past few years. All data collected and reports reviewed clearly indicate and conclude that there are significant problems within the system; that the margin of safety has diminished; and that there is an extraordinary shortage of experienced controllers today, almost 5 years after the PATCO strike.

We agree with these conclusions.

Based on the observations and experiences of our members, we have been convinced for some time that the system is not as healthy as the FAA would like us to believe.

In order to maintain the safety of our ATC system, three things must be accomplished.

First, the experience level of the controller workforce must be increased.

Second, a full capability traffic collision avoidance system, such as TCAS III must be installed in all air carrier aircraft.

Third, the FAA must be provided resources sufficient to carry out the modernization of the ATC system, as described in the national airspace system plan.

These recommendations and concerns that I have put forth are not made from the vacuum of our headquarters in Washington DC. Because of the increased interest in aviation safety, evidenced by congressional hearings such as this one, Madam Chairman, and because of significant safety related legislation introduced both in the Senate and in the House, such as that introduced by Senator Byrd, I surveyed my entire membership so that we would be able to provide significant detailed data from the line pilots' perspective to those in the Congress who will be working on this legislation.

The survey is based on a questionnaire containing over 100 questions on 12 specific areas of concern related to aviation safety.

Those areas include the impact of deregulation on aviation safety and the observed ability of the FAA to respond to this impact; the safety of our ATC system; aircraft maintenance; cabin and passenger safety; and flight security—just to name a few.

Preliminary results of this survey, based on a majority of the returns to date, indicate that there has been a significant impact on safety resulting directly from deregulation.

The two factors most frequently mentioned are financial difficulties experienced by operators and lack of adequate resources for the FAA.

The most frequently mentioned concern expressed in regard to the ATC system is the potential of a midair collision and the increasing delays experienced in flight and increasing congestion at airports.

There were also specific concerns expressed about carry-on baggage with respect to cabin safety and a general reduction of maintenance capabilities and priorities today.

These results indicate that the three topics covered in today's hearing are some of the most critical items needing immediate attention if we are to maintain our fine safety record in the months and years to come.

The full results of the questionnaire will be made available to this committee when they are compiled and processed.

The final area I would like to address today is that of FAA aircraft inspections. I will summarize this.

The first, and most important, question is: Does the FAA have an adequate number of inspectors? Unfortunately, the answer, which will come as no surprise to anyone, is no.

The FAA does not have an adequate number of inspectors to inspect and certify the air carrier and commuter airlines. As a result, the safety level of the industry is not as high as it could be.

ALPA wants to be on the record as recognizing the many excellent FAA personnel, including the present Administrator, who are making an earnest effort to keep the system safe. But it cannot do that with its current resources.

The key to the program is an adequate number of well-trained inspectors, following a well-organized plan, using accepted safety standards. It is a big job and it cannot be done overnight.

The first step, of course, is to start hiring people.

In order to provide the same capability that existed in 1979, the FAA needs over 1,000 additional inspectors, and that is 500 more than Secretary Dole has authorized.

We believe it is obvious from the evidence offered that a great many more qualified inspectors are necessary to ensure a safe transportation system. But just as important is the training that they receive and adherence to the plan.

In summary, we strongly endorse S. 2417 and pledge our support for its enactment.

In regard to the ATC system, we think it is safe, but it needs immediate attention, as previously recommended, if it is to stay that way.

On the subject of the FAA's aircraft inspection program, there is no question that we need more inspectors and improved methodologies to more efficiently use the personnel.

Thank you, Madam Chairman.

[The statement follows:]

STATEMENT OF HENRY A. DUFFY, PRESIDENT, AIR LINE PILOTS ASSOCIATION

Madam Chairman and members of the subcommittee, I am Capt. Henry Duffy, president of the Air Line Pilots Association. I am testifying on behalf of more than 39,000 ALPA members who fly for 46 airlines.

I appreciate the opportunity to be here today to present the views of the association on the special legislation introduced by Senator Byrd to establish an Aviation Safety Commission, and on the status of the air traffic control system and the FAA's Aircraft Inspection Program.

AVIATION SAFETY COMMISSION

The Air Line Pilots Association strongly supports S. 2417, introduced by Senator Byrd, which proposes the establishment of an Aviation Safety Commission. We believe the establishment of such a commission to study the organization and functions of the FAA would be most appropriate, considering the dramatic changes that have occurred in the U.S. aviation and air transportation industry during the past decade. I refer to things such as the Deregulation Act of 1978, the rebuilding and restructuring of the air traffic control system necessitated by the controllers strike of 1981, the development of a national airspace system plan, the ongoing efforts to further automate the ATC system, the unprecedented growth in the number of air carriers, the hub-and-spoke system of airline operations, and improved aircraft avionics and performance.

It is the opinion of the Air Line Pilots Association that for a number of reasons the FAA has not been provided with the resources necessary to carry out its basic safety mandate. This has led to the establishment of priorities, based on inadequate funding levels, which have not in all cases been in the best public interest from a safety perspective.

There is a growing frustration in the industry over a perceived inability of the FAA to respond to user requirements in a deregulated environment in a timely and responsive manner. Much controversy is evident over the Aviation Trust Fund, the dual responsibility of the FAA to "promote" and "regulate" aviation, and so forth. This has prompted industry proposals for dramatic changes, such as the formulation of a federal corporation to assume the responsibilities and functions of the FAA.

With reference to S. 2417, we would like to suggest an addition to the composition of the commission. As stated under section 2(b)(1), the bill would require that the commission be composed of presidential appointees who "possess extensive experience and expertise at the highest executive levels of corporate management." We believe that if such a commission is to perform the functions outlined in the bill, then the commission staff personnel should possess extensive expertise in aviation

matters, including aviation safety with pilotage experience. This can be accomplished under section 4(b)(1) (A) and (B) of the proposed legislation.

THE AIR TRAFFIC CONTROL SYSTEM

During the past 3 years, ALPA has testified on several occasions before various congressional committees on the adequacy and safety of the air traffic control system during the rebuilding process since the PATCO strike of 1981. Our message has been consistent. The air traffic control system is safe, but we are concerned over what appears to be a general reduction in the inherent margin of safety of the National Airspace System. This concern has been developed as the result of reports received from our members who operate daily in this system. In effect, we continuously monitor the ATC system.

In addition to the special monitoring that we conducted during the PATCO strike, we have also reviewed the professional studies on the air traffic control system conducted by the Government Accounting Office, the National Transportation Safety Board, the Jones Committee, and the Flight Safety Foundation during the past few years. All data collected and reports reviewed clearly indicate and conclude that there are significant problems within the system, that the margin of safety has diminished, and that there is an extraordinary shortage of experienced controllers today, almost 5 years after the PATCO strike.

We agree with these conclusions. Based on the observations and experiences of our members, we have been convinced for some time that the system is not as "healthy" as the FAA would like us to believe. Many ATC facilities, particularly the ARTC centers, have not recovered from the effects of the strike in terms of controller staffing requirements. And all ATC facilities are coping with an enormous growth of traffic with a controller work force that has an overall lower experience level.

For example, it is our understanding that the controller staffing level prior to the strike included over 13,000 full performance level [FPL] controllers. (A full performance level controller is one who is fully qualified to operate all positions in a defined area.) As of June 1986, the number of FPL controllers was only slightly over 9,000. While the FAA claims their hiring figures indicate the addition of a much greater number of controllers, the real indication of the success of the rebuilding process is the number of full performance level controllers. Furthermore, being classified as an FPL controller does not necessarily mean that the controller is experienced. It takes years of exposure to combinations of dense traffic conditions, bad weather, and the need to cope with equipment failures to provide an individual with the ability to make good decisions under very trying conditions. The point is that today we have fewer FPL controllers to handle more aircraft, and those FPL controllers on an average are less experienced than those we had prior to the PATCO strike.

It is obvious that the previous FAA management team miscalculated the time required to replace the fired controllers. Part of the rebuilding program was based on further automating the ATC system to reduce controller workload and consolidating some facilities with the premise that fewer controllers would then be needed. However, significant facility consolidation and upgrading of automation will not occur for several more years, well into the 1990s. Further, we understand that it can take 2 to 4 years to train new recruits to the point where they can qualify to perform control duties without direct supervision. The training process to date has been a formidable task and will continue to be so for years to come, costing millions of dollars. We believe that the controller work force can be reinforced in a shorter period of time and at less cost by rehiring some of the fired controllers, particularly those who had already reached the full performance level before the strike. They would be able to requalify after only a short period of refresher training at the facility to which they are assigned. The cost savings could be significant since there would be no need for them to attend the FAA Academy nor undergo extensive on-the-job training.

Recently another situation has come to our attention that may affect the rebuilding process. This is the FAA's decision to award contracts to the private sector to provide the training and automation programming functions at 22 air route traffic control centers. We are extremely concerned about the immediate and future impact this may have on the ATC system. Such training and programming is currently being done at the facilities by highly experienced FAA personnel intimately familiar with local requirements. It is this cadre of controllers and ex-controllers who have been meeting the unprecedented demand for training of new employees hired since the PATCO strike. Now, their experience and knowledge may be lost as a result of the contracting out of these functions. We have had several indications

that this has already caused a morale problem at some facilities. It was apparently a spontaneous decision on the part of the FAA, with little or no prior consultation with the employees involved. This is typical of the FAA's approach to management-labor relations, for which they have been so vehemently criticized in the past.

Our concerns go beyond the immediate impact on the 500 or so employees involved. On-site training of developmental controllers is a very specialized endeavor. The instructors must be thoroughly knowledgeable in procedures and practices unique to the local area. The adaptation of computer programs at the individual facility places similar requirements on the data systems staff. You cannot take a controller from the New York center, for example, and send him or her to some other center so instruct or reprogram the facility's computer, without first providing some training in local procedures unique to the area.

The training of center controllers has lagged in the system rebuilding process, not because of the efforts of current instructors, but because of the large numbers of personnel to be trained. We fear that the contracting out of the center training and automation functions may cause further delay in the rebuilding process. All in all, we feel this was an ill-conceived decision which probably could not pass the test of any cost-saving study.

Deregulation has fostered an unprecedented demand for air traffic services. Increasing pressures on both pilots and controllers to expedite traffic movement causes us to believe that the ATC system is being stretched beyond its limit, resulting in the creation of very marginal situations. We are not saying that individual pilots or controllers are at fault. We are saying that increased pressures are caused by additional aircraft and by the scheduling problems brought about by the hub-and-spoke system.

We realize that the suggestion of rehiring some of the fired air traffic controllers is a sensitive issue within the Administration. The FAA is particularly adamant about its decision not to rehire them, citing the view that rehiring any of the "strikers" would be disruptive to the current work force. We do not agree with such a rationale. The FAA has, in fact, been compelled to reinstate many striking controllers and has rehired some 700 from that group. To our knowledge, this has not resulted in any obvious disruptions or serious morale problems.

In recent months there has been a growing sentiment for the selective rehiring of controllers or at least affording them the opportunity to apply for vacant positions as a viable means to bolster the staffing level of qualified controllers in the shortest period of time. For example, Congressman Guy Molinari, in a letter to the President cosigned by 78 of his colleagues, urged a selective rehiring. More recently he has sponsored a bill, H.R. 4003, to legislate such action. The Air Line Pilots Association strongly supports approval of this legislation. Congressman Robert Michel, in a letter to the President, urged that the Secretary of Transportation be instructed "to look into the feasibility and desirability of rehiring on a very selective, case-by-case basis." In a letter to Administrator Engen, Congressman Oberstar, chairman of the Subcommittee on Investigations and Oversight, requested the submission of legislation from the administration to establish a "screening panel" as a means for accepting applications from former controllers.

FAA'S AIRCRAFT INSPECTION PROGRAM

The Airline Safety Inspection Program is not a new subject. In fact, we testified before the Senate Subcommittee on Aviation last fall on the same subject. Some of my comments will be the same, but they are germane to the issue and deserve repeating.

First of all, I want to clear up some confusion surrounding FAA inspectors and FAA inspections. Many people envision FAA inspectors wearing coveralls and climbing all over aircraft with flashlights and mirrors. Although that is done to some extent by the FAA, the majority of inspections are handled by inspecting the paperwork, files, training, maintenance procedures, etc., and this is the way it should be. It is much more efficient for a trained inspector to ensure that a whole fleet of aircraft is being properly maintained by checking the records on those aircraft than by spending his time climbing around one aircraft at a time. Experience has shown, except in a few cases where unscrupulous operators falsified their records, that an FAA inspector can more quickly locate a potential problem by checking the operator's records than by chancing upon a problem during a hands-on inspection.

The first and most important question is: Does the FAA have an adequate number of inspectors? Unfortunately, the answer, which will come as no surprise to anyone, is no. The FAA does not have an adequate number of inspectors to inspect

and certify the air carrier and commuter airlines. As a result, the safety level of the industry is not a high as it could be.

When new carriers enter our national air transportation system, the FAA Inspection Division is called upon to certificate those new entrants while at the same time continuing to monitor and inspect those operators already assigned to inspectors. Compound this problem by the fact that the number of FAA inspectors between 1979 and 1985 has remained fairly constant while new airlines have proliferated, and you have all the necessary ingredients for a significant safety problem. Obviously, some areas must suffer.

To gain some perspective into the problem, please review the following figures taken from FAA-supplied data or from conversations with FAA personnel:

In 1979, there were approximately 645 FAA inspectors assigned to 178 air carrier, commuter, and air taxi operators.

By the end of 1982, the number of inspectors had been reduced from 645 to 576, an 11-percent decrease, while the number of operators had increased from 178 to 381, a 114-percent increase.

By the end of 1985, the number of operators increased to 526, a 195-percent increase over 1979.

the inspection problem is more clearly delineated when you realize that in 1979 there were approximately 3.6 FAA inspectors for each operator; and as a result of the dramatic increase in the number of operators, this ratio has been reduced from 3.6 to 1.3 inspectors for each operator by 1985. See Charts 1 and 2.

CHART #1

CHART #2

HISTORICAL
PERSPECTIVE
OF AIR CARRIERS OPERATING, HOURS PER YEAR AND NUMBER OF CARRIERS

Year	Air Carrier Number	Air Carrier Hours	Inspectors	Hours per Carrier	Inspectors per Carrier
1976	138	530847	624	3846.72	4.52
1977	145	552194	604	3808.23	4.17
1978	153	580958	605	3797.11	3.95
1979	178	615545	645	3458.12	3.62
1980	315	673019	640	2136.57	2.03
1981	360	648892	674	1802.48	1.87
1982	381	667606	575	1752.25	1.51
1983	409	688569	569	1683.54	1.39
1984	417	738137	674	1770.11	1.62
1985	526	801142	698	1523.08	1.33

In addition to the above, consider that for each new entrant, two FAA inspectors must devote their full time, for a period of approximately 45 days, to certifying the new entrant's maintenance, training, flight operations, manuals and so forth. These are inspectors that are also assigned to inspect other air carrier or commuter operators on a routine basis. However, during the period when they must devote all their time to certifying the new entrant, they obviously cannot perform their normal duties. During the period 1980 to 1985, the FAA had to certify 76 new air carriers and 233 new commuter airlines, so they spent approximately 27,000 man-days just certifying new entrants. it then becomes obvious why so many routine items are going unnoticed by the FAA inspectors: they are simply too busy certifying new entrants and then taking on additional workloads once the new entrants are certified and operating.

But sheer numbers and statistics do not tell the whole story. Just increasing the number of inspectors will not immediately solve the problem. An inspector can only be highly efficient if he/she has the needed expertise and experience, and it takes many years to train an inspector. So even if we could hire several hundred new inspectors, it would be a long time until they could relieve the workload of the present ones. In fact, a new hire often makes the "old timer's" job more difficult because he must train the new person as well as do his own job.

Another aspect to be considered in training is the background of the newly hired inspector. With the expansion of the airline industry, the Government is competing against the industry for the most qualified people. The old law of supply and demand is making it difficult to hire even semi-qualified people.

In an attempt to improve the situation witout increasing manpower, the FAA has shifted some general aviation inspectors back and forth between commuter operators and air carrier operators, far beyond their level of experience. This became necessary as more commuter operators expanded and began to use large aircraft. The significance of this problem first became apparent to us in early 1983 when our members reported that general aviation inspectors were performing the duties of air carrier inspectors. We brought this to the attention of the FAA on several occasions, receiving the standard response, "We are trying to utilize our inspectors in the most efficient manner." Although we applaud such a lofty aim, the means of achieving it are not very satisfactory.

In order to improve safety there is also a need to increase the number of FAA inspections. In general, I would say that more frequent inspections, and hence more total inspections, would improve safety. However, quality is just as important as quantity. Considering the previous discussion on manning levels, I think we may have to be satisfied with fewer than the optimal number of inspections. But in the future, when manning is higher, the frequency of inspections should be increased.

To its credit, the FAA is making an earnest effort to keep the system safe, but it can't do that with its current resources. The key to the program is an adequate number of well-trained inspectors following a well-organized plan using accepted safety standards. That is a big job and can't be done overnight. The first step, of course, is to start hiring people. In 1985, the FAA employed 698 inspectors. We recognize that Secetary Dole has approved the addition of 500 FAA inspectors, and we applaud this action. However, in order to provide the same capability that existed in 1979 (645 inspectors for 178 operators), it would seem that a total of 1906 inspectors is needed, which is an increase of approximately 1208 inspectors. Keep in mind that the number of operators has increased 195 percent.

We believe it is obvious from the evidence offered that a great many more qualified inspectors are necessary to ensure a safe air transportation system. But just as important are the training they receive and the adherence to a plan.

In summary, Madam Chairman, the Air Line Pilots Association supports Senator Byrd's proposal (S. 2417) to establish a Aviation Safety Commission. We are confident that the air traffic control system is safe, but express concern about the potential erosion of safety unless effective measures are taken immediately to provide a more experienced work force, and the FAA must be provided with the necessary resources to carry out its inspection program responsibilities.

Senator KASSEBAUM. Thank you.

Senator EXON. I have just a comment or two.

Thank you very much, Captain Duffy. I appreciate very much your forthright statement, which we usually expect from you.

I agree with you that we are not doing all that we can with regard to safety. There is no excuse for that.

I would go so far as to say that I hope when this commission is appointed, if this bill eventually becomes law, it would come back and make a recommendation as to whether or not we should even reduce the number of planes in the air, as we had to do during the PATCO strike, if that is necessary to improve safety.

There is just one question that I want to ask you.

What percentage of your membership in the Air Line Pilots Association come out of the military? Is it 50 percent, or 75 percent? What would you guess?

Mr. DUFFY. Senator Exon, it has traditionally been at about the 80-percent level. I think the more significant numbers, though, show that over the last several years, that has dropped to about a 40-percent level.

We are seeing a dramatic shift in the people who have traditionally come into our industry.

It is another whole subject for the committee to look at because the licensing requirements and that sort of thing are going to have to keep pace with that shift. It is an item that I know the commuter and regional carriers are very concerned with. We are going to have to look at that over the whole industry.

Senator EXON. It may be a subject for another hearing.

As I expressed earlier, I am concerned about the fact whether the airlines are going to start raiding our military pilots again. This is an option that the military pilots have.

I am concerned about that, where we are getting these pilots from. I am encouraged to hear you say that, evidently, we are getting more and more of our pilots from the private training sector rather than the military training sector.

Is that right?

Mr. DUFFY. There is a fierce competition out there right now, however, with the military paying reenlistment bonuses to keep them and the airlines juggling their pay scales for them.

Senator EXON. I am familiar with that. We have worked on that in Armed Services Committee.

Thank you very much.

If you want to be excused to get on an airplane and, hopefully, to take off within 1½ hours of schedule, you can leave, as far as I am concerned.

Mr. DUFFY. If I could count on that 1½-hour delay, I could stay here a little bit longer.

Senator KASSEBAUM. Let me just ask you one question.

There have been a number of witnesses who commented this morning that it is really a question of money, and that if we could just get the full appropriations, the full authorizations, and support for spending of the Aviation Trust Fund, this would solve some of the problems.

ATA's answer is a Federal corporation.

Do you see this as an answer to spending our moneys more effectively?

Mr. DUFFY. ALPA has grave reservations about the Federal corporation. We are not ready to rule it out yet. But we are saying that obviously the present system has to be fixed.

It is one reason that we are so strongly in favor of this bill.

The winds of deregulation really shook up this industry to a degree that I don't think it has ever seen before. I think it needs a truly objective look.

Maybe it is the Federal corporation, although we have a whole list of reservations about that. But I think an independent commission looking at it and making its recommendations, I don't think that will take the place of subcommittees such as this.

We tend to look at things in these hearings in little slices. I think that perhaps somebody needs to take a step back and look at the overview of the FAA and see if there is not a way to fix it and make it better.

Senator KASSEBAUM. Thank you very much, Captain Duffy. We appreciate your patience.

Mr. DUFFY. Thank you, Madam Chairman.

Senator KASSEBAUM. I will leap now to the end of the table.

Mr. Thornton, we would appreciate receiving your statement.

Mr. THORNTON. Thank you, Madam Chairman.

The National Air Traffic Controllers Association appreciates this opportunity to address you on this most important issue.

NATCA supports S. 2417. It is our firm belief that a thorough investigation of the FAA's organization and functions is required.

We need a Presidential blue ribbon commission because the FAA has been unable to cope with the changing aviation environment.

The results has been marked degradation of airline safety that cannot be tolerated.

In examining the recent record of the FAA, one cannot help but think of the Rogers Commission on the space shuttle disaster.

Are we talking about NASA or the FAA when we hear about constraints being waived at the expense of safety, or that flight rates were not reduced to accommodate periods of adjustment in the capacity of the work force?

The air traffic control sytem has been straining at the seams since airline deregulation.

Unfortunately, as the number of flights mushroomed, there was no corresponding growth in full performance level controllers, the mainstay of the system.

The poststrike controller workforce was at first spared the brunt of deregulation. In August 1981, the FAA wisely curbed the number of flights while it attempted to rebuild the system. However, the restraints were short lived.

When flight limitations were lifted in December 1983, the gaps and weaknesses in the rebuilding concept surfaced and multiplied with such speed that the FAA could not cope. It was at this crucial juncture that the FAA had two choices. It could have reevaluated its plan in light of these difficulties and reduced, once again, the number of flights. This would have been the judicious and prudent course of action.

Unfortunately, the FAA denied that anything was wrong. Rather than address the inadequate number of FPL's, the FAA changed their terminology. It created the so-called operational controller, who could be a controller with any of a number of levels of training. In an operating room, this would have been the equivalent of lumping interns and surgeons together and calling them all "health specialists."

As Representative Gary L. Ackerman of New York commented, the FAA was apparently following the philosophy of changing definitions if you cannot reach your goals.

Where does that leave us?

NATCA hopes that the commission can be a catalyst for getting legislation written and passed that will put the FAA back on the right track.

Frankly, we do not understand how an agency can be ruled by two masters—safety and promotion.

After deregulation, the FAA demonstrated that promotion was its guiding beacon.

If S. 2417 is passed, NATCA would ask that the commission recommend setting up a separate agency within DOT to monitor, and I stress, to enforce safety regulations.

However, we still have some concerns about the bill.

NATCA questions the necessity of excluding experienced individuals, such as controllers, from the commission. The sacrifice in expertise and credibility could be counterproductive.

NATCA is also puzzled as to why the commission is to be made up solely of individuals from the highest levels of corporate management. Corporate management experience should not be the overriding criterion for a seat on the commission. Knowledge of safety should.

NATCA is naturally concerned about the commission's final recommendations. Since the current FAA authorization expires at the end of fiscal year 1987, they take on an even greater significance.

If S. 2417 is passed, NATCA proposes that two sets of recommendations be made—one for the short term, to include examining proposals for increased funding for controllers, inspectors, technicians, and the like; and a second for the long term, to investigate issues such as creating a new airline safety agency within the DOT.

NATCA is worried that we could lose the additional money for new controllers which we need now if we try to lump all of these ideas into one proposal.

Thank you.

[The statement follows:]

STATEMENT OF THE NATIONAL AIR TRAFFIC CONTROLLERS ASSOCIATION

Good morning. My name is John F. Thornton and I am National Coordinator of the National Air Traffic Controllers Association (NATCA). NATCA is a professional organization of Controllers whose primary goal is to represent the nation's Air Traffic Controllers before the Federal Aviation Administration (FAA), Congress and the aviation community.

NATCA supports S. 2417. It is our firm belief that a thorough investigation of the FAA's organization and functions is required. The Aviation Safety Commission would be a good starting point. We need a Presidential blue-ribbon commission because the FAA has been unable to cope with a changing aviation environment. The result has been a marked degradation of airline safety that cannot be tolerated.

For a long time it has been clear to our supporters that the FAA is an agency in serious trouble. Although confronted with severe problems, constructive criticism is rarely accepted. Even more disturbing is the fact that FAA will not admit that there is a problem with the nation's Air Traffic Control System; and there is one which is growing every day.

In examining the recent record of the FAA and the proposed legislation being discussed today, one cannot help but think of the Rogers Commission on the space shuttle disaster. Upon reading the Commission's findings there appears to be much in common between NASA and the FAA. Are we talking about NASA or the FAA

when we hear about constraints being waived at the expense of safety, or the capabilities of the system being stressed to support relentless flight rates, or that flight rates were not "reduced to accommodate periods of adjustment in the capacity of the workforce." One particularly chilling phrase from the Commission's report states that NASA failed to recognize a problem, "then failed to fix it and finally created it as an acceptable flight risk." We would hate to see this as the epitaph of the nation's Air Traffic Safety System.

NATCA's supporters, who are Controllers currently on the job and therefore FAA employees, were among the first to detect the shortcomings in the FAA and the Air Traffic Control System. I would point out that these are Controllers who stayed on the job during the 1981 strike or who were hired as a result of that strike. But even prior to 1981, the system was straining at the seams. Airline deregulation spawned new carriers and cheaper rates. Suddenly everyone wanted to fly. Unfortunately, as the number of flights mushroomed, there was no corresponding growth in the number of Full Performance Level Controllers (FPL's). The FPL, the mainstay of the system, is certified to operate in all positions and performs the critical job of keeping aviation safe and orderly. No other type of Controller can do this job and the FPL is the only Controller who should be counted when measuring the size and capabilities of the present work force.

The post-strike Controller work force was at first spared the brunt of deregulation. In August 1981, the FAA wisely curbed the number of flights while it attempted to rebuild the system. However, the restraints were short-lived. The FAA assumed that it could restore the system quickly and run it effectively without flight restrictions. The agency was also convinced that the system could be operated with 2,000 fewer Controllers than the pre-strike work force.

When flight limitations were lifted in December 1983, the gaps and weaknesses in the concept surfaced and multiplied with such speed that the FAA could not cope. The subcommittee has undoubtedly heard of most of these problems and in the interest of time, I will mention but a few: a high washout rate at the FAA Academy; miscalculation of the time needed to become an FPL; enormous strain placed on the Controllers who stayed on the job; neophyte Controllers being rushed into positions of responsibility that exceeded their capabilities; forced overtime; low morale and a host of others. Although the verdict was not in, it was obvious that the FAA rebuilding plan was flawed and beginning to crumble.

It was at this crucial juncture that the FAA had two chocies. One, it could have reevaluated its master plan in light of the difficulties that were emerging. During this period, the number of flights could have once again been reduced. The FAA had nothing to be ashamed of. After all, it had been confronted with a Herculean task. No responsible individual would criticize an agency charged with ensuring the air safety of the nation for taking a slow, but judicious, course of action.

Unfortunately for the American flying public, the FAA flatly denied that anything was wrong. Rather than address the inadequate number of FPL's at many major facilities, the FAA simply changed terminology. The so-called Operational Controller was created. He or she could be any of a number of Controllers with different levels of training. In an operating room, this would be the equivalent of lumping interns and surgeons together and calling them all health specialists. As Rep. Cary L. Ackerman of New York recently commented, the FAA was apparently following the pholosophy of changing definitions if you can't reach your goals. NATCA could not agree more. The FAA was covering up its failures in semantics.

But where does this leave us? As I mentioned earlier in our statement, the FAA does not respond well to criticism. NATCA is therefore doubtful that the agency will implement any of the recommendations made last spring by the General Accounting Office, let alone any of these made by this organization and the Controllers who support it. NATCA hopes that the Aviation Safety Commission can be the catalyst for getting legislation written and passed that will put the FAA back on the right track.

NATCA has carefully reviewed the legislation and agrees with the six principal areas that the Commission would study. Frankly, we do not understand how an agency can be ruled by two masters; safety and promotion. Eventually one takes a back seat and it is usually *safety*. After deregulation, the FAA demonstrated that promotion was its guiding beacon. The agency accommodated the increase in air traffic but did not augment its Controller, inspector and technical ranks. If S. 2417 is passed, NATCA would ask the Commission to recommend setting up a separate agency within the Department of Transportation to monitor and enforce safety regulations. Moreover, this agency would have to have some teeth, otherwise the FAA will continue with its business-as-usual attitude. Such an arrangement works with other agencies. The Maritime Administration, which is charged with promoting the

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U.S. merchant marine, does not police the operating standards of U.S.-flag fleet; the Coast Guard does. There is no reason why a similar arrangement cannot be made for commercial aviation. It is long overdue and would be most welcome.

In spite of our support for the legislation, we nevertheless have some concerns. The first involves the Commission make-up. Our supporters question the necessity of excluding members of the commercial aviation community from the Commission. NATCA can appreciate the desire to ensure the independence of the Commission's deliberations and judgment. However, the sacrifice in terms of expertise could be counterproductive. Many of us have read how the experience and knowledge of astronauts Neil Armstrong and Sally Ride was invaluable to the Rogers Commission. NATCA is concerned that the Aviation Safety Commission might lose that type of guidance, not to mention credibility, by not having a Controller and pilot on board. We respectfully request that the subcommittee carefully reconsider this point.

Our organization is also puzzled as to why the Commission is to be made up solely of individuals from the "highest levels of corporate management." We do not believe that corporate management experience should be the overriding criterion for a seat on the commission. Frankly, the record of corporate management is blemished when it comes to the safety of the American public. Knowledge of safety, not fourth-quarter earning statements and cash flow, is what we desperately need on the Commission. In this regard, why not bring in one or two experts from a neutral body, such as a university, to sit on the Commission?

Since the FAA is dealing with more than 45 thousand employees, many of them union members, or NATCA hopes, soon to be union members, it makes sense that a representative of organized labor sit on the Commission. If the Congress decides to exclude FAA employees from the Commission, NATCA believes that a labor union president with no ties to the FAA should be granted a seat. The Controllers would feel that at least they were not at the total mercy of a group of managers who may not understand their unique problems.

NATCA is naturally concerned about the final recommendations of the Commission and what form they would take. Since the current FAA authorization expires at the end of FY 1987, they hold an even greater significance. Therefore, if S. 2417 is passed, NATCA proposes that the Commission make two sets of recommendations. One would be for the short term and would include examining proposals for increased funding for Controllers, inspectors, technicians and the like. The second would be to investigate the more difficult and demanding issues such as creating a new airline safety agency within the Depaartment of Transportation. NATCA is worried that we could lose the additional funding for new Controllers that we need right now if we try to lump all of these ideas into one proposal.

Madam Chairwoman, we thank the Subcommittee for this chance to testify on S. 2417. NATCA believes that it is an excellent idea that could be even more appealing if the bill includes the suggestions that we have made. We look forward to the passage of this important legislation and working with the Commission towards finding a way to manage aviation in the United States with safety and excellence.

Thank you.

Senator KASSEBAUM. Thank you.

Mr. Johannssen.

Mr. JOHANNSSEN. Thank you.

Madam Chairman and members of the subcommittee, PASS appreciates your invitation to testify before you today. We enthusiastically endorse the passage of S. 2417 and the testimony given by Senator Byrd.

We favor this bill for a number of reasons, all of which we see as beneficial to the aviation public.

We believe that when the proposed commission looks at the FAA, they will walk away, shaking their heads, wondering how the agency is able to function.

The only reason PASS believes the agency survives is because its rank and file members make the best of a continuously bad situation.

This, coupled with their dedication to the safety of the flying public, has, for years, given us the best aviation system in the world.

Unfortunately, we are no longer sure that it is the best. We feel this panel will be able to give you the truth about the system in its report.

The testimony you receive from FAA officials is not their testimony, but the testimony has been approved by the DOT, the parent agency, and OMB, which speaks for the administration.

Unfortunately, DOT has other interests to represent, and at OMB, aviation safety is not as high a priority as a balanced budget. All too often, the FAA testimonies you do hear have been censored.

In view of the hundreds of millions of passengers and aircraft crew members who use the aviation system on a regular basis, we find this approach to be dangerous.

If the FAA testimonies you hear are accurate, why are the internal memos of the agency so dramatically different?

One needs only to review the recent testimony presented before the House Aviation Subcommittee on June 5, 1986, to realize the difference.

We feel the issue indicated in the FAA briefing papers is accurate, and I quote: "Fiscal 1986 and future funding and employment levels will jeopardize implementation of the NAS plan and maintenance of the National Airspace System."

We feel the problems stated in the words of the FAA are accurate, and I quote: "Airway Facilities staffing has diminished to a critical level. Reductions in fiscal 86 funding and the fiscal 1987 systems maintenance request has seriously eroded program capability. Continued maintenance of NAS at current mandated levels and quality will soon be impossible."

These statements closely parallel a similar set of briefing notes prepared in June 1985, and, again, I quote: "Serious staffing problems in both maintenance and F&E require very close attention. At stake could be the continuing maintenance of today's system and the timely installation of the products of the NAS plan."

In 1985, when these statements were written, the FAA had already projected massive attrition in the work force, but had neglected to inform you of their problem.

If the FAA cannot come before you and tell you the same facts that are being told its highest levels of management, then how can the agency solve its own problems? I hope they do not believe that this distinguished subcommittee is incapable of responding to their needs.

PASS believes you are here out of a serious concern for aviation and are fully competent to resolve these problems. We also realize that you must first be aware of the situation.

PASS's motivation in supporting this bill is to improve safety for the rest of the users of the system. We feel the absence of this commission will further complicate problems until there is another Grand Canyon tragedy on a larger scale.

To date, we have been very lucky. In recent months, numerous reports of outages for extended periods of time at major facilities have been in the papers and have reached our offices.

An outage early in June totaly wiped out all the radar presentations at the Baltimore-Washington International Airport. There have been reports of 6 and 8 hour outages in flight data computers at both Boston Center and New York Center. Dallas-Fort Worth re-

cently had a total communications failure that tied up traffic throughout the entire State of Texas, and caused delays that affected aircraft on both the east and west coasts.

These outages are happening, and they are happening more frequently, in spite of all of FAA's reassurances.

We do not want to see aviation degraded to a point where it will become a crap-shoot when you board an airplane. Because of the apparent lack of total honesty from the FAA, we respectfully request that S. 2417 be endorsed wholeheartedly by this subcommittee and receive your bipartisan support.

From our close association with the controller work force, we can state that staffing shortages in airway facilities work force directly affect controllers. Equipment outages increase air traffic control workloads. Lengthy restoration periods increase the potential of collision and near-miss situations for the traveling public.

Controllers must have total confidence in the equipment they use if they are to be competent. When outages occur more frequently and last for longer durations, the competence of the controller is affected.

Only with an adequate work force in the FAA can the agency properly police the skies and maintain the safety standards necessary for the users of the system.

In summary, the Professional Airway Systems Specialists work force must be built back up until it reaches a total of 9,000 specialists, excluding supervisors and support staff. Fifteen hundred are needed as soon as they can be hired. To further delay only jeopardizes our ability to maintain the current reduced levels of safety in the skies.

The flight inspection officers of FAA also need to be increased by an additional 50 flight inspection pilots and specialists. To let the attrition continue, we cannot say that it will be safe for you to fly in the future.

We additionally ask that you urge your colleagues on the Senate Appropriations Subcommittee on Transportation to adopt language similar to that recently adopted by the House Appropriations Subcommittee on Transportation, which prohibits the expenditure of funds for a current FAA pilot test program on contract maintenance.

We encourage you to adopt prohibitive language because the FAA estimates that this program will cost between $10 and $15 million more to continue to perform the work in-house. At a time when the Senate is worried about meeting the goals of a balanced budget act, these moneys could contribute significantly toward achieving that end.

Thank you.

[The statement follows:]

STATEMENT OF PROFESSIONAL AIRWAYS SYSTEMS SPECIALISTS [PASS]

Madam Chairman and Members of the Subcommittee: [PASS] appreciates your invitation to testify before you today on an issue we feel should be endorsed wholeheartedly by this Subcommittee. PASS enthusiastically endorses the passage of S-2417 and the establishment of the aviation safety commission called for in this bill. We favor this bill for a number of reasons, all of which we see as beneficial to the aviation public.

The make-up of the proposed commission is appealing to PASS as it would call for people with extensive executive, leadership qualifications to serve on the panel. We believe that should individuals of this caliber take a good look at the FAA, they will walk away shaking their heads wondering how the agency is able to function as well as it does. This agency has more levels of bureaucracy than most other activities of the Federal government. The only reason PASS believes the agency survives is because its rank and file members make the best out of a continuously bad situation. This, coupled with their dedication to the safety of the flying public, has for years given us the best aviation system in the world. Unfortunately, we are no longer sure it is the best. We feel this panel, with its expertise, will be able to give you the truth about the system in its report to you. It will make recommendations to you on actions necessary to restore us as the world leaders in aviation we should be.

Most of the time the testimony you receive from FAA officials is not their testimony, but testimony that has been approved by the Department of Transportation, the parent agency, and the Office of Management and Budget, which speaks for the Administration. All too often the FAA testimonies you hear have been censored. For example, in 1987 the FAA requested $815,719,000 for the Airways Facilities Division to do its job safely. By the time the request was submitted to the Congress, it was already decreased to slightly over $761 million by OST and OMB. The programs these monies would have supported were obviously needed; otherwise, the FAA would not have requested them. Unfortunately, at OMB aviation safety is not as high a priority as a balanced budget. In view of the hundreds of millions of passengers and crew members who use our aviation system on a regular basis, we find this approach to be dangerous.

If the statements you hear in FAA testimonies are accurate, why are the words spoken within the agency so dramatically different? One needs only to review the recent testimony presented before the House Aviation Subcommittee on June 5, 1986, to realize this difference. Chairman Mineta questioned the FAA Associate Administrator for Development and Logistics very closely on the testimony he was giving in June versus a memorandum he had sent to both the Administrator and the Deputy Administrator on March 4. A copy of this memorandum is Attachment 1 to our formal testimony.

This memorandum is further followed up by copies that have been provided to members of your staff of briefing notes dated March 20, 1986 from the same individual. We feel the issue indicated in these briefing notes is accurate. "FY-86 and future funding and employment level will jeopardize implementation of the NAS plan and maintenance of the National Airspace System." We feel the problems stated in these briefing notes are accurate: "Airway Facilities staffing has diminished to a critical level. Reductions in FY-86 funding and the FY-87 SM [Systems Maintenance] request has seriously eroded program capability. Continued maintenance of NAS at current mandated level and quality will soon be impossible.

These statements closely parallel a similar set of briefing notes prepared in June of 1985 by the Associate Administrator for Development and Logistics, Al Albrecht. As the cover memorandum indicates, this briefing was given to the Administrator and Regional Directors. Again we quote, "Serious staffing problems in both maintenance and F & E [Facilities and Equipment] require very close attention. At stake could be: the continuing maintenance of today's system; the timely installation of the products of the NAS Plan . . . ." In 1985 when these statements were written, the FAA had already projected massive attrition in this work force but had neglected to inform you of their problem. The FAA did not even admit it had a staffing problem until our union went public with these internal documents. In his testimony before Chairman Mineta, Associate Administrator Frisbie downplayed the problem because it did not match the budgetary constraints that OMB placed upon the FAA's request for money.

If the FAA cannot come before you and tell you the same facts that are being told to its highest levels of management, i.e., the Administrator and Regional Directors, then how can the agency solve its problems? Surely they don't believe that the Administrator and Regional Directors have the power to create more money for the FAA to spend. I hope they don't believe that this distinguished Subcommittee is incapable of responding to their problems. PASS believes you are here out of a serious concern for aviation and are fully competent to resolve these problems. We also realize that first one must be aware of the problems. To this end since the FAA cannot come forward and tell you the total truth, PASS sees no alternative but to ask that you heartily and unanimously support S-2417 and urge your colleagues in the Senate to do the same.

We realize the establishment of the commission and the completion of their study will not happen quickly. Therefore, we additionally ask that you urge your colleagues on the Senate Appropriations Committee, Subcommittee on Transportation, to adopt language similar to that recently adopted by the House Appropriations Committee, Subcommittee on Transportation, which prohibits the expenditure of funds for a current FAA pilot test program on contractor maintenance. The test program would be conducted in the FAA's Eastern, Southern and Great Lakes Regions. We encourage you to adopt prohibitive language because the FAA estimates this program will cost between $10 and $17 million more than to continue to perfrom the maintenance in-house. At a time when the Senate is justifiably worried about meeting the goals of the Balanced Budget Act, these monies could contribute significantly toward achieving that end.

Secondly, if this work force is contracted out, it cannot be easily replaced. By the FAA's own estimates, once individuals are hired the training time for them to become full performance level specialists is three to six years. Again, this pilot test program was originally pushed for heavily by OMB and DOT and is not wholeheartedly endorsed by the FAA. This is yet another example of where the FAA, this nation's guardian of safety in the skies, has had to go forward with policies from OMB and DOT that it finds questionable.

PASS's motivation in supporting this bill is to improve safety for the users of the System. We realize this bill alone will not solve the problems. Yet, we feel the absense of this commission will further complicate these problems until there is another Grand Canyon tragedy on a larger scale. To date we have been lucky. In the last few months, numerous reports of outages for extended periods of time at major facilities have been in the papers and reached our offices. A recent outage in early June totally wiped out all the radar presentations at Baltimore-Washington International Airport. The controllers were without radar for hours and it was a full three days before the situation was returned to normal. This outage was caused by a lightning strike. There have been reports of 6 and 8 hour outages in the computer areas at both Boston Center and New York Center. Dallas/Ft. Worth recently had a total communications failure that tied up traffic throughout the entire State of Texas and caused delays that probably affected aircraft on both the East and West coasts.

These outages are happening, and they are happening more frequently in spite of the FAA's reassurances. This system needs to be examined closely and you, the elected representatives of the American flying public, must be told the truth about what needs to be done to preserve the integrity of the system. We do not want to see aviation degraded to the point where it will become a crap shoot when you board a plane. Your actions on this Subcommittee affect the lives of all the users of the aviation system as well as the lives of your colleagues and yourselves. These actions also impact on a major portion of this country's economy that is dependent in so many ways upon aviation. Because of the apparent lack of total honestly from the FAA, we respectfull request that S-2417 be endorsed wholeheartedly by this Subcommittee and receive your bipartisan support. We further request that you urge for expedited handling of this bill through the Senate and eventual passage to establish the commission.

In addition, you have asked us to address the FAA controller and systems specialist staffing levels, controller competence, traffic loads, near misses and related issues. While we are closely associated with the controller work force, we do not have the expertise necessary to properly speak for them. In this regard, we suggest you contact the National Air Traffic Controllers Association (NATCA) here in Washington. We feel this organization would be the best source of information as it represents the interests of the controllers.

From our close association with the controller work force, we can however state that staffing shortages in the Airways Facilities work force directly affect the controllers. Equipment outages increase Air Traffic Control workloads. Lengthy restoration periods increase the potential of collision and near-miss situations for the traveling public. Controllers must have total confidence in the equipment they use if they are to be competent. When outages occur more frequently and last for longer durations, the competence of the controllers is affected. Only with an adequate work force in both the Air Traffic and Airways Facilities Divisions of the FAA can the agency properly police the skies and maintain the safety standards necessary for their users of the system. To continue to increase one segment, namely the controller work force, and not maintain an adequate systems specialist work force creates a false sense of security. The flying public believes its needs are being met because more controllers are being hired, without realizing these new controllers are not being given the necessary tools. This scenario is similar to sending an army off to fight a war with arms and no ammunition.

As indicated earlier in our testimony, we have recently testified before the House Aviation Subcommittee on the critical staffing needs of the Airways Facilities work force. The compelete testimony can be found in Attachment 2 to our formal statement. We encourage you to take the necessary steps to adopt the suggestions we have outlined in this testimony to the House. We are willing to work with you or any other group you designate to solve this critical problem before there is needless loss of life. Thank you.

Senator KASSEBAUM. Thank you very much.

Mr. Galipault.

Mr. GALIPAULT. Thank you, Madam Chairman.

I guess I feel like the caboose on a long train of witnesses at this hearing. I guess also I could assume one of two roles: either magnificent summarizer of what was said, which I don't think I could really do; or the janitor and sort of pick up any bits and pieces that were left on the floor.

On the floor I think are a few small pieces that go beyond what other people have said, perhaps. My testimony tends to follow basically I guess that which Senator Byrd presented, but which you will find in other aspects of people's testimony.

In 1927, Charles Lindbergh wrote a book called "WE." In that book, he, in a very interesting way, forecasted that the airlines of America, in order to survive, must not be dependent upon a subsidy. I have quoted that in the early part of my testimony.

I think that was a significant statement on his part.

In 1978, we entered into a great experiment. I think the question is has the experiment been a success or have we come pretty close to burning down the laboratory?

I would like to refer you to a document that was published in 1977, and is attached to my testimony and brought to the attention of what was then Congressman John Burton's subcommittee, which I think is rather prophetic. It is the FAA flight standards people who said, in August of 1977, that we are in serious trouble with respect to our inspection capabilities. It cites a number of things that would be affected because of a shortage of inspectors.

So I think that internal memorandum has really come to pass as a truth. Regardless of the fact that it was 9 years ago, I think the important thing is that we should have learned during those 9 years what to do to make the system properly operate.

Everyone who has talked today has an argument that I can agree with. But almost every one of them has an argument that I could disagree with.

Our organization is only interested in safety. We have no other compelling interest.

So we look at this from a perspective that I think is somewhat unique.

I would say that the significant problem when deregulation came about was that we did not exercise equal or greater control over what was being done.

Now, I say "control," but we are talking "deregulation."

I think the control that I am talking about is the duty of the FAA to maintain close surveillance and whatever necessary sanctions to make the system properly operate.

Those standards had been compromised, and I think that we faced a situation where the FAA let the airlines develop a free-wheeling, "damn the torpedoes" performance. It was a laissez-faire

arrangement on the part of the FAA, maybe because they did not have enough people to do the job.

But, regardless of that, I think the truth is that the FAA has failed in its responsibilities to keep our system at the highest level of safety.

Now, we throw that word, "safety," around, and it has all kinds of meanings. It's just like the word "fatigue." Fatigue, for you, is different than what it means to me.

But Webster has simply defined it as the absence of risk or hazard. If we say that we have a safe system, then there is no risk, there is no hazard.

But we know that as soon as you step on an airplane, you are assuming some risk. Whether it is an airplane, an automobile, a skateboard, or getting out of the bathtub, we have risk and we have to accept it. We have to know what it is.

The fact is the FAA has not known what that risk has been.

I think it is particularly well brought out in the hearings following the Arrow air crash at Gander, NF. The FAA had an Executive Order, 8000.4(b), as I recall, which said that it would notify the military whenever they saw a safety problem.

Now, you have to realize that this is December 1985, not 1975—but 1985. It was just a few months ago. When confronted with the interpretation of this, Mr. Broderick said:

> Oh, we interpreted that as we will let you know when we are going to take certificate action on an air carrier.
>
> In other words, shut the airline down. We are not going to tell you that they have management problems or money problems or anything else; we are just going to tell you when to shut them down.

Well, that is insufficient.

There is this lack of control, and I think that, while the Administrator and his people are trying to do more to straighten out those basic problems that they inherited, I think there is a need for this bill to be enacted so that we can take an objective look at the FAA.

Granted, there were many oversight hearings. You people participated in some of them. Collectively I don't know how many hours you were involved. But it would seem to me that a commission that devoted the better part of a year would be able to get into the very fundamental parts of the question about the FAA and have sufficient time to really explore those problems in the depth that is required.

In the interest of allowing everyone to proceed with the rest of their day, I think, if you have an opportunity to read my testimony, you will see my views. We support the bill. We applaud you for doing what you have done and we hope that you can continue to press on with it.

Thank you.

[The statement follows:]

STATEMENT OF JOHN B. GALIPAULT, PRESIDENT, AVIATION SAFETY INSTITUTE

Thank you, Madam Chairman, for giving me this opportunity to present the views of the Aviation Safety Institute (ASI) on some of the issues to be considered in the evaluation of Senate Bill S. 2417.

In 1927, the visionary Charles A. Lindbergh wrote about his early adventures in aviation in a book entitled "WE". In it he discussed the prospects of a viable future

for commercial aviation. I wish to quote a few paragraphs from that section of the book:

"Commercial aviation, in the United States, has been retarded in the past by lack of government subsidy, but the very lack of that subsidy will be one of its greatest assets in the future. A subsidized airline is organized with the subsidy as a very large consideration. The organization exists on the subsidy and its growth is regulated by the subsidy. Years will be required before the point of independence is reached and the receipts become larger than the expenditures.

"On the other hand, an airline organized without regard to an external income is in a position to expand along with the demands for service. If the traffic becomes great enough to require more or bigger planes, a larger profit ensues, instead of an increased subsidy being required or the fare being raised to hold down the demand . . ."

It required a bold and uncertain step by Congress to test the foresight of Mr. Lindbergh and authorize the Deregulation Act of 1978. The burning question now seems to be: "Was deregulation a mistake? Is it a socio/economic experiment that could burn down the laboratory?" One side argues that there are distinct correlations between airline deregulation and increased hazardous incidents and accidents. Others contend that there is no valid evidence of such relationships. Regardless of the winner in the argument, the fact remains that interesting vistas have been seen by hundreds of thousands of new passengers, more airlines have emerged, and new city pair routes at low cost have resulted. On the other hand, old routes were dropped and virtual elimination of major air carrier service has plagued some population areas. More airlines, more jobs, more people traveling by air, and more utilization of our expensive National Airspace System (NAS) are compelling arguments in favor of deregulation. While there are pro con economic arguments about deregulation, there are equally interesting polarizations of opinion with respect to safety and deregulation.

After nearly two decades of working in the aviation safety arena, I must conclude that there can be a generalization as to the factors that influence safety—in either positive or negative ways. These are groupings of factors that can and have prevented or contributed to accidents and near-accidents.

The PEOPLE who are directly involved in flight operations: pilots, mechanics, air traffic controllers, flight attendants, ramp/service personnel, meteorologists and others.

The POLITICS which influence the regulations, rules and policies that guide aviation.

The ENVIRONMENT which includes weather, air traffic control, airport configurations, and similar features in our "outside" world.

The MONEY that any fleet operator has available which permits him to operate within the law, and a fifth factor I prefer to call

The ATTITUDE of MANAGEMENT with respect to its legal and moral responsibility for the safety of flight.

It should be apparent that one or more of these factors may interact to either compound or confound safety. All of them come into play at some point during any serious discussion of safety. Deregulation has impacted on all of these factors and there are methods of evaluating the corresponding effects on safety.

For instance, suppose you and I were locked in a time capsule 11 years ago without knowledge of aviation events and suddenly released and given the 1975–1985 accident statistics. We had no knowledge of deregulation, the early 1980's recession and other economic and political factors. We are now asked to draw conclusions about the root causes of the changes in the statistics. So, I suppose we would seek a sufficient variety of statistics in order to understand the events and trends.

Let me now provide you with a meager set of data with respect to airline operations from 1975 to 1985, as shown in Table I.

TABLE I.—LISTING OF ANNUAL AIRLINE DEPARTURES, REVENUE PASSENGER MILES (RPM) FLIGHT HOURS, NUMBER OF INCIDENTS, RATIO OF DEPARTURES RPM, RATIO OF DEPARTURES TO FLIGHT HOURS (SOURCE: FAA)

Year	Departures	RPM [1] (x1000)	Flight hours	INC [2]	R1 [3]	R2 [4]
1975	4,456,146	1,947,660	4,826,355	348	.0023	.9233
1976	4,598,152	2,051,614	5,047,504	430	.0022	.9110
1977	4,798,591	2,161,952	5,296,101	449	.0022	.9061
1978	4,874,565	2,249,102	5,449,292	586	.0022	.8945

Year	Departures	RPM [1] (x1000)	Flight hours	INC [2]	RI [3]	R2 [4]
1979	5,232,381	2,471,401	6,090,313	616	.0021	.8591
1980	5,222,879	2,523,375	6,247,795	708	.0021	.8360
1981	5,099,380	2,442,294	6,080,401	517	.0021	.8387
1983	4,920,125	2,552,942	6,174,957	601	.0019	.7968
1984	5,304,710	2,854,299	6,897,513	699	.0019	.7691
1985	5,610,552	3,023,605	7,364,493	1,054	.0019	.7618

[1] RPM.—Revenue passenger miles (in billions)
[2] Inc.—Number of incidents (near misses, etc.)
[3] RI.—Ratio of departures to RPM
[4] R2.—Ratio of departures to flight hours

A correlation statistical analysis shows that there is a strong positive relationship between the number of aircraft departures and incidents. There is a strong negative correlation between the number of incidents and the ratio of departures to flight hours.

This says that the increase in air traffic corresponds to a proportional increase in incidents. At the same time, as the number of flight hours per annual departures decreased, the number of incidents also proportionately increased. The inference is that more short flights were made and that the chance for near misses and runway incursions increased. Does this mean that deregulation is the culprit? I do not feel that any conclusion can be made that ties deregulation directly to the incidents, unless one recognize that deregulation has permitted dramatic increases in air traffic nationwide. The significant increase in departures over the eleven years of data would not likely have occurred with regulation of routes and carriers.

Suppose after the eleven year hibernation we were to read the DALLAS TIMES HERALD series on aviation safety or the plethora of reasonably accurate investigative articles coming from the media in the past twelve months. We would speculate that deregulation has caused several critical things to happen. First, fierce cut-throat competition between the old-line carriers and the revolutionary low-cost airlines required deep cost-cuttings. Aircraft weight reduction programs (including the removal of life rafts and greatly reduced fuel loads), dramatic wage concessions, union busting, hub and spoke route structures, increased open maintenance items on aircraft, reduced training and qualification standards for crews, and other conditions have cut deeply into the margins of safety established during regulation.

One more thing, as you and I examine the statistics, we see a general trend of decreasing numbers of accidents during the eleven years. The exception was 1985, but we could easily argue that the increase in accidents was not really significant although the number of fatalities was, and that can be explained away by other rationale. The point is that the number of incidents has increased—the things that happen but do not quite produce major damage or injury and/or death. The rise in incidents has been notable and a warning for us to heed. So, if we agree that our eleven year absence was, in part, caused by deregulation, how did the FAA let this happen? How could the great deregulation experiment be flawed?

I contend that it is a lack of "control". Congress expected the Federal Aviation Administration (FAA) to assume a tough posture with respect to the introduction of new airlines, surveillance of the old carriers and all of the attendant operational performance standards that must be followed in order to assure the highest levels of safety. By its own admission, the FAA Office of Flight Standards in August 1977, gave warning to Administrator Langhorne Bond that there would be significant impediments or barriers to achieving even a semblance of control over the quality of service and safety that airlines would produce for years to come. I have attached a copy of an FAA memorandum and the intra-subcommittee correspondence authored by former Congressman John L. Burton. He expressed concern about the content of the 1977 memorandum and the contradicting testimony of Administrator Bond and Associate Administrator Skully.

I had submitted testimony for the record at those 1977 hearings on deregulation and warned that deregulation would incur considerable confusion and dangers for the traveling public. The process of deregulation demanded a strong and forceful FAA, a leadership that would produce regulatory guidance and strong remedies for lax performance. However, it is our view and the opinions of others in the safety business that rather than providing effective leadership, the FAA permitted a laissez-faire attitude and a free-wheeling "damn the torpedoes" performance by the air carriers. The FAA is not totally at fault: who would know that near rapid growth in airline startups would be matched by an almost precipitous downturn in the

number and quality of flight standards inspectors, incredible workloads on field personnel and a sanctions logjam that signalled to some airline operators that one is innocent if one can hide the illegal corporate economic manipulations.

The truth is that the FAA has failed to meet its responsibilities in the civil aviation community. It has even been sterile in its promises to the Department of Defense as evidenced by the tragic Arrow Air crash last December at Gander, Newfoundland. Granted, the FAA has once again reacted to the pressure and demands by Congress and the American Public and now appears to be headed back on course to toughness and strength. We must keep it on course.

I am not certain that the FAA can do any better under its present Department of Transportation blanket. I am dubious of its ability to guide its own destiny under the political pressures that assail it from every direction. It has no evasive action left to avoid excessive compromises that individually may win certain benefits for a few, but weaken U.S. aviation overall. Our National Airspace System and our aviation industry are vital national assets we must protect like our wetlands, shorelines, natural resourse and our people. We cannot willy-nilly sell off our assets for short-term or temporary benefits. We must look forward and thoughtfully invest time and effort to devise the most effective mechanism for oversight and control of our aviation assets.

We should also take a careful look at the air traffic control (ATC) system. It is overburdened and understaffed. Simply put, we have too many airplanes flying for the ATC system to handle. Mr. Lyle K. Streeter, a control supervisor at Los Angeles En Route Center, recently sent a letter to the Editor of AVIATION WEEK AND SPACE TECHNOLOGY. Let me quote a small part of that letter because he succinctly and eloquently says it all:

". . . (Captain Dick) Siano's solution of rehiring 5,000 controllers will be of some help. It will help me get an occasional extra day off, it will make it easier for me to get my vacation when I want it and it will ease my load on days when controllers are sick. It will not create more runways, it will not create more sky, it will not reduce the separation standards for aircraft and it will not reduce the tremendous and growing demand for ATC services. The solution lies in the creation of an ATC system that has the flexibility to meet user demand, and if you are willing to bear the tax burden of such a system your legislator is the one you should be writing."—(AWST, June 23, 1986, Page 188)

The safety issues in ATC are too extensive to even touch on in this short hearing. There is sufficient good evidence furnished by GAO and others to warrant a more comprehensive examination of ATC safety. Similarly, the FAA inspection programs, shortage of aviation electronics technicians, the contracting out of computer programmers and controller training are all serious matters. Perhaps the mechanism proposed in S. 2417 will provide solutions to these matters.

As an aside, I am deeply concerned about the proposed use of Aviation Trust Funds for FAA operation budgets. If the OMB insists on utilizing these funds that are supposed to be used for safety enhancements, then the people and organizations providing these tax dollars should be given relief. In other words, any funds taken from the Trust should reflect a reduction in ticket, fuel and other assessments on aviation. We have so many serious and potentially rewarding projects that could enhance safety that to misuse these billions of vital dollars is unacceptable.

Our country just went through a serious soul-searching, embarrassing expose by the President's Commission on the CHALLENGER shuttle accident. From that experience we should learn that the FAA is not more sacrosanct than NASA. The Federal Aviation Act of 1958 was a vital savior step for aviation. The Act is sound, even if deregulation has streteched the limits of its capabilities. It is time for an incisive examination of the FAA. Senate Bill S. 2417 will help us find the proper measure of wisdom and proportion to guide the aviation industry into a safer and healthy future.

So what I would hope to see is a commission that has teeth, that can get things done. We are now in the 50th year of aviation. You would think they would have their act reasonably straight.

It is obviously they do not. I would hope the commission would have teeth to set things in the right direction, for what the Congress wants and for what the people of the United States want, and that is a safe system.

I would like to see teeth in whatever their recommendations are and to see you understand all the overview they had in the past. I

don't think that hinders them. I think that sharpens them up and they are a little more cautious.

I see the changes that they have made for the good. They have made those. These have been the result of those hearings, rather than as a lack of them.

Mr. THORNTON. I agree somewhat with Mr. Johannssen.

The FAA has been studied a bit lately for a reason, the reason being is that they are an agency in trouble. They have had a trauma in 1981 that they are trying to recover from. But they keep putting the date of recovery off and off and off.

They had a loyal work force that remained with them, that worked long hours, and that lost very close friendship as a result of that act. Then, to hear their employer give its view in The New York Times and cast them as "historic malcontents," as "constant complainers," because of the GAO survey—well, I think it is an agency that needs a lot of study.

Hopefully, this study will be done in advance of something happening, rather than as a result of something happening.

Senator KASSEBAUM. Mr. Thornton, let me ask you this.

Would you support limiting the number of flights as a solution to some of the air traffic control problems that we face now?

Mr. THORNTON. I believe that is a very viable solution right now, in the way the status of the system is.

Controllers today are working as hard and as long as they can. It is the rubber band that is stretched to the limits. It cannot go any further. Annual leave is being canceled for controllers all across the country. They are asked to work some very strange hours.

The FAA is attempting to cut back on its use of overtime, on its use of scheduled overtime. Now, what controllers have done to get out from under this overtime is they have gone out and bought answering machines. The FAA says "scheduled overtime." That means that if you are home when the phone rings, they are going to ask you to come in on one of your days off.

This is one way the controllers are getting around that.

Senator KASSEBAUM. Thank you.

Senator Exon.

Senator EXON. Madam Chairman, thank you.

Gentlemen, I am going to be brief. Most of you have been here since we started this morning. It has been a long, but I think a very informative, hearing. There are maybe just two things that I want to touch on.

First, Mr. Thornton, Mr. Johannssen, Mr. Galipault, thank you for coming here. Your testimony has been last, but it has been extremely informative.

The point that was made by you, I believe, Mr. Johannssen, or perhaps it was Mr. Galipault, concerned a study done in 1977.

Was that you, Mr. Johannssen?

Mr. JOHANNSSEN. No, that was Mr. Galipault.

Senator EXON. It was Mr. Galipault.

Well, I want to take a look at that. I think that is interesting. That was before deregulation and before the PATCO strike. If we had problems then and if we add that on top of what has happened since 1977, it should be obvious to most people that we had some potential problems.

The question that I have to ask each of you is whether or not I, as a layman, am on the right course.

Mr. Thornton, I think the stretching rubber band is a good way to put the difficulties that we have now in our control towers. But I think, as tight as that band is, by and large it is working. It is not working as efficiently as I would like to see it, but it is working.

I, frankly, am very much concerned about that problem—the morale problem, the overtime problem, the fact that we are going to have more difficulty down the road. I am also concerned that as these people start retiring, as the recent study has indicated they will do, where are we going to get the experience that is necessary?

But, even putting all of this aside, I think maybe we have an overriding consideration today with the inspection of maintenance procedures and inspection of aircraft.

Let me put it another way.

When I am waiting for that hour and a half out there at National Airpott to fly home, as I said earlier, I am somewhat relieved to know that the air traffic controllers are not letting me off the ground until it is safe. So I think that is good.

I frankly worry more about that airplane that I am traveling on that is going to go up there, and the lack of the personnel to get the job of maintenance surveillance done with the ever increasing number of airplanes. As I have said on many, many occasions—and since you are here today, you probably have heard me say it, but I will repeat it once again—if I were in the trucking business, for example, and I had the extreme strains of competition that you see today in airlines, you know, the cutting of fares; if I were in the trucking business and they were cutting the rates down to the level where it was difficult for me to make any money on my balance sheet at the end of the month, I suspect that I would run those tires another 10,000 miles on those trucks.

Putting this in terms of the homeowner, I would probably not paint the house as often as I would otherwise, every 5 years; I might let the shingling job go for another year or two and take the risk.

Well, I am very fearful that with the pressures that are on the profitability of the airlines today that we may have a major problem, such as I complimented Senator Byrd for addressing on page 18 of his statement today. He said that:

> Concern has been expressed that the competitive economic environment established by airline deregulation has created incentives for cost-conscious airlines to cut costs, and improve profits, by cutting aircraft maintenance budgets and maintenance personnel.

Am I right, as a layman, thinking that that is probably as much or more of a potential threat to safety than even the lack of adequate staffing in the control towers?

Mr. JOHANNSSEN. You know, every time I fly, I get up into the cockpit, I talk to the flight attendants on board, and I share with them what is going on on the ground, and I ask them to share with me what is going on in the air. So I hear a lot of things.

Particularly, you look at a lot of airlines that are cutting back on their flight attendants. Historically, the first time I flew, I was scared to death, and I am still a little nervous today. But one thing that I felt comfortable with was having trained and qualified flight

attendance, particularly one for each emergency exit if it had to be used.

You know, you don't have that comfort today.

So, when you talk to the flight attendants travelling today, I ask them what are their concerns. I am hearing that there are concerns in the cockpit, there are concerns from the flight attendants. There are concerns all over the industry, I learn, when I talk to John, who was here, about what is going on in air traffic control.

Our people work in those facilities.

It is much like you said if you had a trucking business.

Back in 1978, we had a brand new Ford, Cadillac, or whatever the car, made with brand new tires. Here we are, 10 years later. The tires are bald and we are doing 75 or 80 miles an hour in a 35-mile-an-hour zone. It is only a matter of time that if we do not pay attention to it and put on even a good used set of tires that we are going to be in trouble.

Senator EXON. Then, do you think I am sound in my concern that the proper maintenance and inspection of maintenance is probably more of a concern today than even the stretched rubber band for the controller?

Mr. JOHANNSSEN. I think that that rubber band is stretched equally.

Senator EXON. So you think they are both a problem?

Mr. JOHANNSSEN. Yes.

That is one of my real reasons for the level of concern that I try to demonstrate.

We do not have a problem in one specific area that we can suddenly turn to now and adjust quickly. The entire industry, for many reasons, has similar or the same problems.

That is my concern.

Senator EXON. Do you have anything to add to that?

Mr. GALIPAULT. Yes, sir.

Last Thursday, the rubber band almost broke here in Washington Center Airspace. The computer went down for almost an hour. One of the radar sites, called the Benson Site, was incapacitated. Communications failed, and there were aircraft all over the Washington Center area that were stuck on the ground. The system shut itself down—luckily.

You know, I go back to Ben Franklin. He said it beautifully: "Delay is preferable to error."

The fact is that we do have an air traffic control system where the rubber band is so stretched that I do not think it is going to come back to its old elaticity. These people are worn out.

There is not enough time to talk to you about the problems. I realize that.

I will say on the other side that when Eastern Airlines had its inspection, there was one airplane that flew over 10,500 flights without a faulty part being inspected or removed.

Now, when you talk about the economics of flying, these people are risktakers. They are high risktakers. And it is still going on, Senator, and it is not going to stop until you make it stop.

Senator EXON. Thank you.

Mr. Thornton, do you have any comments?

Mr. THORNTON. Yes.

I agree with what everyone has said already about the concern about the inspectors.

That is the problem with these hearings and studies that the FAA complained about this morning. They focus on one little area, and it gets a play in the media for 2 or 3 days and then seems to be forgotten. Then the FAA drags its feet. Unless the occurrence that created that concern reappears, then it is forgotten.

In this way, looking at the agency as a whole, as its function, and to see if its mandate of promotion and safety are in conflict is the more proper way to go, I think.

Senator EXON. Gentlemen, thank you very much.

Thank you, Madam Chairman.

Senator KASSEBAUM. Thank you.

I very much appreciate your testimony.

That concludes this hearing.

[Whereupon, at 1:20 p.m., the subcommittee adjourned, to reconvene upon the call of the Chair.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF BRUCE B. HENRY, PRESIDENT, NATIONAL ASSOCIATION OF AIR TRAFFIC SPECIALISTS

Mr. Chairman and distinguished Members of this Committee, I am grateful that you have provided me with the opportunity to appear before you and to express my thoughts and opinions relative to the establishment of the Aviation Safety Commission. I am accompanied by Mr. Edward L. Huie, our Director of Legislative Affairs.

The Flight Service System is an integral part of the Air Traffic Control System and there are approximately 300 flight service stations throughout the United States. The personnel who staff the Air Traffic Control System are designated by the Office of Personnel Management as Series 2152 and are called: Air Traffic Control Specialists (Station).

This category is the least understood of all the categories because of the lack of term standardization and the widespread use of colloquialisms. FAA, and others as well, confuse the issue by referring to this category as Flight Service Specialists, Specialists, Flight Service Station Specialists, Station Specialists, Station Personnel, Station Controllers and Controllers. It is so confusing that uninformed persons sometimes infer that these are the personnel who fuel and maintain aircraft. For NAATS, this is an overwhelming educational burden. The other two categories are: Air Traffic Control Specialists (Terminal), Air Traffic Control Specialists (Center).

This Association is designated by the Secretary of Labor as the exclusive representative of all the bargaining unit members who are Air Traffic Control Specialists (Station) Series 2152.

As a general statement, this Association supports any formal statutory Board of Commission convened to study and to enhance all facets of aviation safety. The Aviation Safety Commission, as envisaged by S. 2417, is such a body and the Bill is fully supported in concept. There are, however, two areas of concern upon which we make recommendations.

Most aviation safety authorities agree that 40% to 50% of all aviation accidents are weather-related. These accidents result in hundreds of human fatalities each year it is, therefore, a fertile field indeed for exhaustive study and recommendation. It may be argued that the broad mandates to the Commission may already cover this aspect of aviation safety. However, due to the magnitude of weather effects on aircraft, we believe that the subject is worthy of added emphasis when charging the commission.

Accordingly, we recommend that new paragraph (7) be added to Sec. 3. (b) as follows:

(7) The collection, analysis, priority, and dissemination of aviation weather information is adequate for the user in both preflight and inflight situations.

Secondly, in Sec. 3. (d) (1) we consider that the term "air traffic controllers" is inconsistent with the other descriptions of personnel communities with whom the Commission should consult.

Moreover, the term as written invites thousands of individuals to express personal views without the benefit of a consensus, and, accordingly, denigrates the work of the Commission.

Therefore, it is recommended that the following language be substituted in Sec. 3. (d) (1):

(1) representatives of air traffic controllers. The term "air traffic controller" has the same meaning as such term is defined pursuant to 5 USC 2109 as amended by Sec. 207 (b) PL 99-335.

With the recommended changes, we fully support the provisions of S. 2417.

Thank you, Madam Chair.

STATEMENT OF THE NATIONAL BUSINESS AIRCRAFT ASSOCIATION, INC.

Madam Chair and Members of the Subcommittee: Thank you for allowing the National Business Aircraft Association, Inc., (NBAA) to present this statement. NBAA represents business aviation in the United States. As our 2900 member companies operate their aircraft as a means to facilitate their daily business transportation needs, we are vitally concerned with any and all proposed legislation which might affect our members' ability to make full use of their aircraft. Such is the case with S. 2417, the Aviation Safety Commission Act of 1986, which would direct the President to appoint an independent commission to study and make recommendations regarding aviation safety.

At the outset, we find it necessary to make two observations with respect to S. 2417 and the subject of aviation safety. First, the emphasis of S. 2417 on "commercial" aviation is both perplexing and gratifying. This concentration is perpexing as it completely overlooks the largest segment of civil aviation, general aviation, of which business aviation is a growing part, which is responsible for the overwhelming majority of both "commercial" and non-commercial aircraft flying today.

The emphasis on "commercial" aviation is gratifying because, assuming as we do that the term is used as a reference to operators of large aircraft in scheduled operations, commonly thought of as "airlines," it is a manfestation of the ever-improving safety record of general aviation, statistics for which we would be happy to provide the Subcommittee. Also, we must point out that the United States' highly developed system of air commerce, while not without its faults, is the envy of every other nation. It handles more traffic and passengers than any other and, most importantly, is the safest in the world. Its safety record, despite periodic appearances of "in-depth investigative" journalism and sensationalistic headlines which erroneously suggest otherwise, is improving yearly.

S. 2417

Numerous aspects of S. 2417, especially its lack of consistency with existing and previous aviation statutes and the apparent mindset behind it, are of most serious concern to us. The stated goal of S. 2417 is to examine the role of the Federal Aviation Administration (FAA) in maintaining and ensuring safety in the competitive environment established by airline deregulation. This goal would be realized throught the creation of an independent commission to undertake a study of the various aspects of aviation today. Emphasis is to be placed on the "dual role" of the FAA in promoting the development and growth of air commerce and ensuring the highest levels of safety, and the conflict, if any, of these two Congressional directives. As part of the study, the commission would be directed to consider:

1. Whether the FAA has been provided adequate resources and, if so, whether it has adequately used those resources.
2. Whether the FAA should be reorganized as an independent Federal agency with aviation safety as its sole responsibility.
3. Whether safety recommendations of the National Transportation Safety Board (NTSB) should be made mandatory on the FAA.
4. Whether the FAA's responsibility of promoting "commercial" aviation should be assigned to another agency of the Federal government. Allow us to discuss each of these directives separately.

HAS THE FAA BEEN PROVIDED ADEQUATE RESOURCES

Although debate on the adequacy of FAA's resources could rage for years without final resolution, we would maintain that two basic building blocks—financial and jurisdictional resources—have been supplied in adequate quantity. The financial resources are provided by the creation and use of the Airport and Airway Trust Fund, which is designed to funnel user-derived revenues into aviation system development and in which currently reposes approximately $8 billion in unobligated funds which can only be used for aviation system development. The jurisdictional resources have their foundation in the landmark 1958 Act and the various amendments thereto which reserve to the Federal government the powers to regulate all aspects of air commerce.

However, the institutional resources, which would allow the FAA to use its financial and jurisdictional resources to maximum benefit, have not kept pace. Many of the problems affecting the FAA today, and which S. 2417 would create a commission to identify and make recommendations to remedy, are the root product of the institutional pressures levied upon the agency as a function of its placement under a cabinet-level Department which neither has a pervasive interest in aviation nor is

committed to its promotion. As a consequence, aviation and the needs of the FAA are forced to take a back seat to other, more politically expedient considerations and more readily understood modes of transportation. Simply stated, the FAA has not used its resources because it has not been allowed to.

These pressures are also a function of the relationship between Congress and the FAA, the agency having to depend upon the legislature for the appropriation of dedicated, user-derived revenues, and the position of the agency within the Executive Branch. This situation has resulted in chronic underfunding of capital improvements in the system of airports and airways. Additionally, in its continuing quest to pinch Federal pennies without regard to the long-term consequences, the current Administration has simply failed to live up to the trust placed in it by the public by reason of its refusal to spend the comparatively miniscule amounts needed to ensure adequate staffing of air traffic control facilities, Flight Service Stations and the many other safety and operational functions of the FAA. Underfunding of the FAA, whether effected in its capital development programs or in staffing, has had and will continue to have a direct and adverse impact on the ability of the FAA to fulfill both its missions—promotion and safety of aviation—as needs become more acute and the years of neglect heaped upon it mount.

Thus, we must conclude that the FAA, through no fault of its own, has not fully utilized its financial and jurisdictional resources simply because it has not been provided adequate institutional resources. The pressures resulting from this failure have been added to by the fact that policy decisions have been removed from the hands of those tasked with the day to day operation of the agency and have fallen to those too far removed from aviation to comprehend its needs and realities. In the all too rare instances when understanding is present, political and budgetary considerations have intervened, resulting in a state of near-atrophy. This state must be eventually addressed by Congress in legislation.

SHOULD THE FAA BE REORGANIZED AS A SEPARATE AGENCY WITH SAFETY AS ITS PRIMARY RESPONSIBILITY

We believe the idea of removal of the FAA, in its entirety, from within the Department of Transportation has a great deal of merit. However, we are concerned that the cart of aviation safety might be placed ahead of the horse of aviation promotion and development, both of which receive equal emphasis in the 1958 Act and amendments thereto.

We are convinced that the "question" of aviation safety and the seemingly contradictory, but in reality quite complementary task of the promotion of aviation, should remain under one agency of the Federal government, for reasons of economy, jurisdictional questions, consistency and quality. The promotion of aviation is, at the same time, also the promotion of aviation safety, for aviation as we have all come to know it cannot exist without the highest degree of safety. Congress, perhaps realizing this, wisely chose to make one agency responsible for these tasks in 1958.

The real question posed by S. 2417 is, "Which agency of the Federal government should be responsible for the promotion of 'commercial aviation.'" We would respond that no agency of the Federal government should promote "commercial" aviation, especially as the term is used in S. 2417. For the reasons we have outlined earlier and will discuss later in this statement, S. 2417 is wide of the mark in this regard.

Of course, if the promise of the 1966 Act creating the Department of Transportation had been realized, there would be no need to even consider divorcement of the FAA. NBAA has long been concerned with the disregard of aviation by the Department of Transportation. In an NBAA Policy/Position Paper first enunciated in September, 1977, we noted:

The Department of Transportation has not produced a comprehensive policy dealing with national transportation systems. Development of such policy is not only inherent in the 1966 Act, but was expressly mandated in the Airports and Airways Development and Revenue Act of 1970. Absence of comprehensive policy, ratified by appropriate legislation, gives no framework for achieving truly "coordinated, effective administration" of Federal transportation programs.

NBAA further believes that relationships between the Department of Transportation and the Federal Aviation Administration have at times been strained, counterproductive and detrimental to the promotion of the air transportation system. In large measure, these failings stem from the absence of agreement as to the depth of involvement of DOT in the day-to-day functionings of the FAA.

It is obvious to us that the same problems we identified in 1977 are still prevalent today, despite new-found evidence of "micromanagement" decried by many.

Thus, should Congress truly wish to study reorganization of the FAA, it should consider the historical relationship between the agency and its parent Department, the provision of institutional resources to the agency through the parent and means to ensure that political and personal factors which have no bearing on transportation do not enter the decision-making process. The results of such a study should be developed for inclusion into the upcoming re-authorization of FAA's programs and fully debated by all concerned parties. We would welcome such a process.

SHOULD NTSB SAFETY RECOMMENDATIONS BE MADE MANDATORY ON THE FAA

Over the years, NBAA has been very fortunate to have established and maintained an excellent working relationship with the National Transportation Safety Board. As a rule, we find their personnel and product, respectively, to be of the highest caliber and quality. This is true despite continuing attempts by the Administration to reduce the Board's budget and size. We also find the existing relationship between the NTSB and other transportation regulatory agencies to be a healthy one. We fear that any attempt to make NTSB's safety recommendations mandatory on an agency such as the FAA would fundamentally alter this relationship, resulting in a degradation in the quality and effectiveness of the Board's output.

One of the key reasons the NTSB is so well respected, both domestically and abroad, is its attention to detail and total dedication to safety in transportation. However, NTSB does not have the time, the manpower nor the expertise to be fully congnizant of the scope or total effect its safety recommendations might have on an industry or agency. By making its recommendations mandatory, we fear Congress would thwart the Board's effectiveness. This would come about through diminution of the quality of its output as the impact and effect of a particular recommendation, upon consideration, would result in its being "toned down" to the extent it would not carry the same weight. Additionally, we would strenuously object to making the Board's safety recommendations mandatory on the FAA without similar changes in NTSB's relationship with out transportation regulatory agencies. We also note that NTSB frequently makes recommendations to entities outside the Federal government. Should its recommendations be binding on others? We think not.

In sum, the NTSB enjoys a unique freedom to operate and a well-deserved degree of respect within and without the aviation industries. Any attempt to alter its fundamental relationship with transportation regulatory agencies would, we feel, result in a diminution in the quality and effectiveness of its work, something which would be contradictory to the Board's purpose. We trust Congress will not give serious consideration to such proposals.

SHOULD THE FAA'S RESPONSIBILITY OF PROMOTING COMMERCIAL AVIATION BE ASSIGNED TO ANOTHER FEDERAL AGENCY

In our view, general and business aviation have taken an undeserved back seat to whatever is perceived as "commercial" aviation for quite some time. Sadly, S. 2417 would perpetuate and institutionalize this error. Since deregulation of the airlines in 1978, the Department of Transportation has bent over backward to nurture the use of the public's airspace for the benefit of the scheduled carriers. The rush to be of service to scheduled carriers has been to the detriment of every other form of civil aviation, which have been largely ignored. This mindset is evident in policy decisions relative to airport and airspace use, decisions made under the anti-trust jurisdiction delegated to DOT by deregulation and, unfortunately, also in the erroneous assumption found in S. 2417 that the only segment of aviation of which the FAA is to statutorily assure the safety and promotion is "commercial" aviation, however defined.

Read carefully, one will discover that the 1958 Act directs the FAA to provide for the safety and promotion of all but military aviation, not just "commercial" operators, which has a meaning far beyond the narrow-minded, short-sighted purport of S. 2417. Unfortunately, this distinction has been lost on many, including those who drafted S. 2417. In the meantime, general aviation, a great deal of which is operated for hire and is therefore "commercial" in the truest sense of the term, has withered to the point of stagnation while various calamities, including excessive and abusive taxation, underfunding of airport and airway development and intrusive state and local regulation of interstate air commerce have been allowed by the Federal government to inexorably chip away at its foundations until all activity indicators are trending downward.

Quite simply, the FAA, the DOT and the Congress have failed to promote all aspects of civil aviation, concentrating only on those which fit someone's misguided

concept of what type of operator is worth retention and promotion. Should serious proposals be advanced to fundamentally alter the relationship between all or part of the FAA and the DOT, we would strenuously oppose any efforts to separate the FAA's safety functions from those of the promotion of civil aviation.

CONCLUSION

In sum, we feel S. 2417's proposal to establish a commission to concentrate on the ill-defined promotion of "commercial" aviation and safety is counterproductive. An approach much more responsive to the needs of the FAA and the industry it regulates would be to study the agency's relationship to its parent Department, that Department's unswerving dedication to policies favoring scheduled carriers operating large aircraft and the lack of consistent, forceful Federal policy for the promotion of aviation. Should such a measure be contemplated by Congress, we would applaud its sponsors and work toward its passage.

As currently drafted, S. 2417 does not address the fundamental problems confronting aviation at this time and its enactment would not be beneficial to the industry. We trust this Subcommittee will see fit to address the real problems we have outlined in a meaningful and constructive manner. We stand ready to assist it in such an effort.

Thank you for allowing us to prevent this statement.

Has Deregulation of Air Travel Affected Air Safety

(By Richard B. McKenzie and William F. Shughart II)

INTRODUCTION

The rash of airline crashes, near misses and blown jet engines in 1985 has raised fears that the deregulation of airlines has reduced air safety. Policymakers are understandably concerned that airline deregulation—coupled with the controllers strike in 1981 and the Reagan Administration's changes in budget priorities for agencies like the Federal Aviation Administration (FAA)—has led to higher casualty rates for air travel.[1] These concerns have resulted in calls for stricter surveillance of airline safety by the FAA. Indeed, re-regulation of the airlines has been proposed by some policymakers.

However, Alfred Kahn (who was instrumental in deregulating the airline industry) and Daniel Kasper maintain:

[T]he argument that deregulation has made airline travel more hazardous—despite the fact that there has been no dilution in the Federal Government's responsibility for safety—represents a triumph of preconception over fact. We now have the results of seven years of experience under deregulation. The statistics are clear: Accident rates for United States airlines have improved markedly, not deteriorated, since deregulation.[2]

This paper seeks to shed light on the policy dispute by evaluating empirically the impact of airline deregulation on air fatalities. As explained in detail below, our initial expectation was that deregulation of airline ticket prices and entry restrictions, in and of itself, would be negatively related to air safety. That hypothesis, however, has not been supported by the empirical work covering regularly scheduled passenger airlines for the period 1973 through 1984.

There are also good reasons to expect that airline deregulation would have caused a substitution of air travel for automobile travel, resulting in an overall reduction in the death rate from travel. We conclude, however, that airline deregulation has neither significantly reduced nor raised overall deaths from automobile travel or airline and automobile travel combined.

In general, our research findings suggest that independent of the extent of regulation, market forces deter firms from being lax in safety. Companies whose equip-

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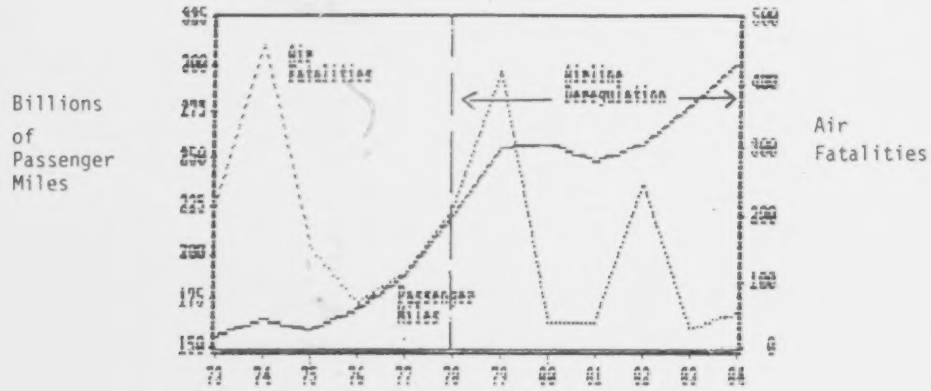
[1] See for examples of recent news reports on alleged laxity in air safety, Richard Witkin, "Concerns on Air Safety: Questions and Answers," New York Times (September 12, 1985), p. 14; Richard Witkin, "Some Airlines Called Lax on Safety," New York Times (October 2, 1985), p. 14; Jonathan Dahl, "Equipment Trouble: Airline Safety Snafus at American Airlines Inspire a Wider Probe," Wall Street Journal (November 6, 1985), p. 1; Burt Soloman, "FAA Runs Into Some Heavy Turbulence in Aviation's Worst Year for Fatalities," National Journal (October 12, 1985), pp. 2313-2316.

[2] Alfred E. Kahn and Daniel M. Kasper, "Airline Safety Without Re-Regulation," New York Times (April 14, 1986), p. 21.

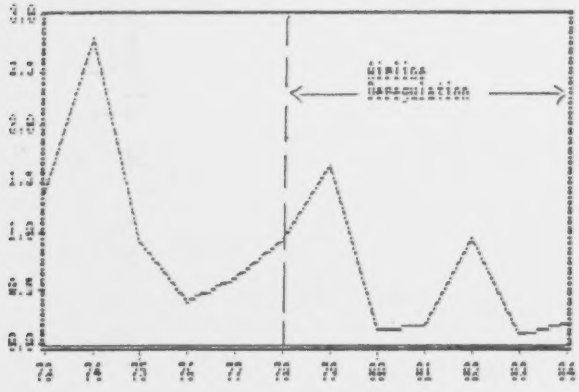
ment is involved in fatal accidents tend to be penalized, depending on available information concerning the proximate cause of the crash. These penalties tend to regulate safety reasonably. For example, following the 1979 Chicago DC-10 crash, the stockholders of the plane's manufacturer, McDonnell Douglas, experienced a loss in the value of its stock of about $200 million.[3]

Figure 1. U.S. Airline Passenger Miles and Fatalities, 1973-1984


Billions of Passenger Miles
Air Fatalities
Airline Deregulation
Passenger Miles
Air Fatalities
72 74 75 76 77 78 79 80 81 82 83 84

Source: Federal Aviation Administration

Figure 2. U.S. Air Fatalities Per Billion Passenger Miles, 1973-1984



Source: Federal Aviation Administration

[3] See Andrew Chalk, "Market Forces and Aircraft Safety: The Case of the DC-10," Economic Inquiry 24 (January 1986), pp. 43-60.

Such real and potential wealth losses likewise encourage airlines to monitor their safety records, perhaps to such an extent that FAA safety controls do not materially affect airline fatalities. Indeed, we found that changes in real FAA budget or in the number of air traffic controllers during the 1973–1984 period did not significantly affect airline fatalities.

INDUSTRY STATISTICS, 1973–1984

In 1973, there were 31 domestic air carriers and only four additional airlines in 1978, the year of deregulation. However, by 1984, 96 domestic carriers were flying the American skies. Because the number of planes increased by 13 percent and the average seats per plane expanded by 25 percent between 1973 and 1984, the total number of seats from 1973 to 1984 rose by approximately 40 percent.

Even more impressive has been the growth in the number of "revenue passenger miles" flown by domestic carriers. In 1973, the 31 domestic carriers flew just over 157 billion passenger miles; by 1984, the 96 domestic carriers flew nearly twice as many passenger miles, 300 billion miles. (See Figure 1.)

At the same time, the annual number of fatalities trended downward throughout the period, reflecting the "bunching" of deaths with crashes of large planes (for example, the Chicago crash of 1979 and the New Orleans crash of 1982). Air fatalities per billion passenger miles has also cycled downward from an average of 2.08 in 1973–1974 to an average of .13 in 1983–1984. (See Figure 2.)

AIRLINE DEREGULATION AND SAFETY: THE CONCEPTUAL ARGUMENTS

Clearly, the fatality rate for travel by air has declined, not increased, since deregulation, as Kahn and Kasper have stressed. The remaining question, however, is whether the trend toward improved air safety may have been slowed by deregulation. Conceptually, at least, there are two potential factors that could have slowed the improvement in air safety:

Firs, the number of air carriers rose dramatically after deregulation. The inexperience of the new airlines could reasonably be expected to increase the risk of more airline mistakes and more accidents.

Second, the deregulation of real air fares, per se, might reduce safety efforts of long-established airlines, as well as inexperienced newcomers. When airlines are prevented from competing by reducing prices, as they were under the control of the now-defunct Civil Aeronautics Board, we might expect them to compete by the many non-price means available to them, including the attractiveness of in-flight meals, planes, attendants—and air safety records.

If fare regulation spurred non-price competition, deregulation of air fares might be expected to have caused a substitution of price competition for non-price competition. That is to say, holding other factors constant, deregulation might lead to a substitution of a marginal increase in the probability of accidents for a marginal reduction in ticket prices.

Two additional factors, not directly related to "deregulation," per se (i.e., eliminating the CAB), also could have an important effect on the pace of air safety improvement:

The FAA budget fell in real terms from approximately $141 million in 1978 and 1979 to $102 million in 1982 and was still only $131 million in 1984. After rising throughout the 1970s, the number of air traffic controllers declined due to the strike and subsequent firings in 1981 from a high of over 31,000 in 1981 to slightly more than 27,000 in 1984. Public resources, in other words, devoted to regulating air safety were reduced in the 1980s.

The average size of airplanes, as measured by the number of seats available, and the percentage of seats filled increased with deregulation. Even if airlines crashes were unaffected by deregulation, the number of deaths might be expected to rise.

Admittedly, the debate over the safety impact of deregulation cannot be settled by conceptual arguments alone. The actual quantitative impact of price deregulation on air safety depends critically on a number of factors. How stringently the FAA has monitored air safety both before and after the advent of deregulation is one factor. The willingness of airlines and the public to trade safety for price advantages also plays a role.

In addition, the safety standards during the regulatory regime may have exceeded the safety goals that would have been sought by airlines under non-price competition. Lastly, the FAA may have sought after deregulation to offset any inclination on the part of the airlines to sacrifice safety in the face of price competition by increasing its own safety surveillance and the expected fines for safety violations.

In addition, it is important to stress that the deregulation of airlines could have led to an increase in the availability of flights and a reduction in real air fares and, thus, in the cost of air travel relative to automobile travel. A reduction in the relative cost of air travel could be expected to cause a substitution of air travel (the safest long-distance transportation mode) for automobile travel (a less safe long-distance transportation mode). As a result, the deregulation of air travel might have reduced the overall death rate from travel. The death rate for passenger car travel averaged 35.7 per billion passenger miles between 1980 and 1984, whereas the death rate for airline travel averaged only .3 per billion passenger miles during the same period.

Clearly, air travel cannot take the place of all car travel. However, the comparative death rate statistics for air and automobile travel may mean, roughly speaking, that for every billion miles of travel undertaken by air instead of car—because of deregulation and lower air fares—more than 35 lives may have been saved. Looked at differently, for those instances where air travel is substituted for auto travel, air safety would have to decline by a factor of 100 or more before airline deregulation could cause, on balance, more travel deaths.

This line of analysis does not imply that policymakers should be complacent about airline safety. But it does strongly suggest that even if deregulation slowed the pace of improved air safety, airlines should not necesarily be re-regulated by a new Civil Aeronautics Board in the name of saving lives. For that matter, a drive to increase the safety of airlines by the Federal Aviation Administration could conceivably raise airline costs and ticket prices, causing a substitution of automobile travel for air travel that would lead indirectly to more travel deaths. Unfortunately, the data required to determine the substitution effects of airline ticket price changes on the mode of transportation chosen is not avialable.

AIRLINE DEREGULATION AND SAFETY: THE EMPIRICAL FINDINGS

The critically important policy question at stake is whether airline deregulation has, on balance, caused more or fewer deaths from travel by plane and car together. In this section, we empirically investigate the impact of airline deregulation on the number of travel fatalities experienced in the United States between 1973 and 1984. Our main positive finding is that deregulation has significantly increased the number of miles flown each year. However, the additional passenger miles flown do not appear to have had a statistically significant influence on the annual total of airline fatalities or on air fatalities per passenger mile.

To investigate the effects of deregulation on air fatalities, we used a two-step ordinary least squares procedure. First, we estimated the impact of deregulation on air passenger miles, using a regression equation of the following log-linear form:

$LAIRMI_t = b_0 + b^1\ DEREG_t + b_2\ LCONTROL_t + b_3\ LPRICE_t + b_4\ LINCOME + e_t$

where: $LAIRMI_t$ = scheduled airline passenger miles in billions in year t
$DEREG_t$ = dummy variable for airline deregulation (0 = 1973–78; 1 = 1979–84),
$LCONTROL_t$ = number of air traffic controllers,
$LPRICE_t$ = relative price of air fares (air fare price index/motor fuel price index),
$LINCOME_t$ = real personal income per capita,
e_t = regression error term.

The regression equation was estimated using data on scheduled airline passenger miles obtained from the FAA.[4] The results reported in Table 1 indicate that airline deregulation has had a significant impact on air passenger miles. Indeed, deregulation during the 1979–84 period increased passenger miles flown by approximately 4 percent. Real per-capita income also had a significantly negative impact on passenger miles flown, as expected. The number of air traffic controllers does not appear to have a statistically significant effect on miles flown.[5] Other specifications for the regression equation, which included variables for real FAA budgetary expenditures, the controllers' strike, and trend variable, did not yield useful improvements in the general findings about the impact of deregulation.

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[4] Data obtained from the FAA on air passenger miles and fatalities are significantly different from data in various issues of other published sources. We elected to use the FAA data because it is "official" and because the data from published sources were at times inconsistent when the data series overlapped from one issue to another.

[5] The negative sign on the coefficient for the number of controllers may be explained in part by possible efforts by controllers to reduce the volume of air traffic prior to the strike.

The second step in the empirical analysis was to estimate the effect of air passenger miles predicted from the above equation on the number of air fatalities and air fatalities per billion passenger miles. Two log-linear equations were used:

$LDEATHS_t = b_0 + b_1 LAIRMIF_t + b_2 TREND_t + e_t$
$LDRATE_t = b_0 + b_1 LAIRMIF_t + b_2 TREND_t + e_t$
where:
$LDEATHS_t$ = total air fatalities on scheduled airlines in time period t,
$LAIRMIF_t$ = predicted air passenger miles on scheduled airlines,
$TREND_t$ = linear time trend,
$LDRATE_t$ = total air fatalities on scheduled airlines per billion passenger miles.

TABLE 1.—*Determinants of revenue passenger miles flown by regularly scheduled airlines, 1973–84*

C	−24.2453
	(−4.480)
	[0.004]
DEREG	0.0440
	(3.287)
	[0.017]
LCONTROL	−0.0302
	(−0.056)
	[0.957]
LPRICE	−0.4737
	(−2.921)
	[0.027]
LINCOME	3.2560
	(6.074)
	[0.001]
Adjusted R^2	.967
Durbin-Watson	1.978
F-statistic	71.015

(t-statistic).
[two-tail significance level].

The results are reported in Table 2. While positive in both equations, predicted number of passenger miles does not appear to have a significant influence on either the total number of air fatalities or the rate of air fatalities per mile of passenger travel. Several other forms of the equations were tried, seeking to determine if airline deregulation has had a statistically detectable effect on air safety as measured by air deaths and death rates. We found none, either direct or indirect.[6]

In addition, we were unable to show that the size of the real FAA budget, the number of controllers, and the controllers' strike have had a statistically detectable impact on air fatalities. Finally, we sought to estimate the impact of deregulation on airline maintenance expenditures or on the real FAA budget and found no predictable effect.

Our analysis leads us to one overriding conclusion. Through 1984, airline deregulation has not directly, or indirectly through passenger miles flown, affected air deaths. There are several possible explanations:

The actual change in air fatalities due to deregulation may be too small to assess by the statistical techniques used.

More time may be required before changes in air safety will appear in casualty statistics.

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[6] We also sought to determine if there was an interactive effect between the dummy variable used for deregulation and the trends in airline fatalities and death rates by multiplying the two variables and introducing the product as an independent variable. This procedure was used to determine if there was an upward or downward "kink" in the downward trends in deaths and death rates due to deregulation. The interactive variable was never significant at the 10 percent confidence level or below in any of the specifications.

TABLE 2.—DETERMINANTS OF FATALITIES ON REGULARLY SCHEDULED AIRLINES, 1973–84

	Dependent variables	
	LDeaths	LDrate
C	−2.7850	−2.8183
	(−0.176)	(−0.184)
	[0.865]	[0.859]
LAIRMIF	2.5053	1.5163
	(0.657)	(0.410)
	[0.530]	[0.692]
TREND	−0.3055	−0.3069
	(−1.230)	(−1.275)
	[0.254]	[0.238]
Adjusted R^2	0.143	0.358
Durbin-Watson	2.372	2.394
F-statistic	1.611	3.042

(t-statistic).
[two-tail significance level].

Air fatalities may be largely random during any relatively short period of time. Market forces, involving the threat of penalties through higher insurance premiums and lost customers, may largely offset any natural competitive tendency of airlines to forgo safety in search of ways to reduce their prices.

As mentioned previously, the data necessary for directly determining any substitution effects of airline deregulation on auto fatalities is not available. However, we did find that the number of automobile passenger miles does have, as expected, a significant positive effect on the number of motor vehicle deaths but not the auto death rate (both of which moved generally downward during the 1973–1984 period).

We also regressed automobile passenger miles against a variety of varibles, including a dummy variable for airline deregulation. While the dummy variable for airline deregulation was generally negative (as might have been expected), it was never significant, suggesting that airline deregulation may have had some slight negative impact on automobile deaths by way of reduced auto miles traveled.[7] However, if there has been an effect at all, the number of lives saved from a shift of travel from cars to airlines is too small to specify with any reasonable degree of confidence.

CONCLUDING COMMENTS

Our empirical work leads to several important conclusions. First of all, within the time period covered by this study, airline deregulation has had no detectable impact on air safety as measured by air fatalities. If anything, the death rate for air travel has only been improved due to the positive impact of deregulation on the volume of air travel.

In addition, airline deregulation has had no detectable substitution effect in saving lives on the nation's highways. Also, recent cuts in the FAA real budget, reductions in the number of controllers, and the 1981 controllers' strike do not appear to have had a significant impact on air deaths.

In general, contrary to popular opinion, there is to date no evidence that America's skies have become less friendly following deregulation. Moreover, air safety seems to be largely unaffected by changes in a number of other factors though to be directly related to air travel risk. This is not to say that the FAA or air traffic controllers are not important to safety but it does imply that the changes made thus far have not been made at the sacrifice of safety. Proponents of re-regulation of the airline industry appear to have little empirical support for their claims that resurrecting the Civil Aeronautics Board would improve air travel safety.

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[7] We, again, followed two-step least squares procedures, estimating the motor vehicle passenger miles with LPRICE, LINCOME, and DEREG as independent variables and then using the predicted values from vehicle passenger miles as an independent variable, along with TREND, to assess the determinates of total vehicle deaths and motor vehicle deaths per billion passenger miles. Aside from the obvious switch in death and mileage variabbales, the procedures were the same that were employed in the airline equations reported in the body of this paper.

NATIONAL CONSUMERS LEAGUE,
Washington, DC July 15, 1986.

Hon. NANCY KASSEBAUM,
Chairman of the Senate Aviation Subcommittee, Dirkson Senate Office Building, Washington, DC

DEAR SENATOR KASSEBAUM: We are writing in support of the proposal to establish an Aviation Safety Commission that would study and make recommendations about FAA management of its responsibilities for aviation safety.

As shown in the attached[1] documents, airlines are spending less of their operating expenses for maintenance. This trend should be carefully monitored by the FAA. To achieve adequate oversight, an additional number of qualified safety inspectors and clerical assistants is needed. Presently, the FAA does not have the staffing capacity to exercise its responsibility to monitor airline maintenance and inspection.

The League urges your subcommittee, and the Commission if created to investigate how more funds can be allocated to improve the monitoring and enforcement infrastructure of the FAA and the air trafic control system. The panel of witnesses should be questioned on possible means of utilizing the Airport and Airways Trust Fund. Specific proposals may include the removal of the Trust Fund from the overall federal budget, or the establishment of a separate federal corporation/agency funded through the Trust Fund. Questions should also focus on other means of exempt air safety enforcement from Gramm-Rudmann budget cuts and the pressures to decrease the government deficit.

With a more efficient and adequately funded FAA, the League believes that better air safety can be achieved.

Sincerely,

LINDA F. GOLODNER,
Executive Director.

AIR TRAFFIC CONTROL ASSOCIATION, INC.,
Arlington, VA, July 16, 1986.

Re S. 2417, to Establish the Aviation Safety Commission.

Hon. NANCY LANDON KASSEBAUM,
Subcommittee on Aviation, Committee on Commerce, Science, and Transportation, Hart Senate Office Bldg., Washington, DC.

DEAR MADAM CHAIRMAN: The Air Traffic Control Association is a professional association which has as its goal advancements in the science and profession of air traffic control and aviation safety. ATCA's membership consists of air traffic controllers, airways facilities technicians, managers, flight service specialists, pilots, and other persons, corporations, and organizations engaged in development, production, operation, maintenance, and use of our National Airspace System.

ATCA hereby submits for the record of hearings on aviation safety, scheduled to be conducted by the Subcommittee on Aviation on July 17, 1986, its views on proposed legislation (S. 2417) to establish an "Aviation Safety Commission." This bill would establish an independent commission of seven individuals to study the structure and functions of FAA, including whether FAA could perform more effectively and with increased safety if it were separated from DOT and re-established as an independent agency.

Provided that the Commission would be impanelled without delay, ATCA supports S. 2417 as a positive step toward open discussion of important issues that are due for consideration. ATCA is, however, concerned that the qualifications for Commission members set forth in the bill will preclude persons with the necessary and desirable aviation knowledge and experience from participating as commission members. Specifically, the bill as drafted would preclude former FAA Administrators, airline or other aviation industry executives, and aviation consultants—the persons most knowledgeable about the subject—from serving. ATCA therefore, recommends that Section 2(b)(1) of S. 2417 be amended to specify that Commission members shall "(1) possess extensive experience and expertise in aviation related activities," rather than expertise in corporate management exclusively.

ATCA also recommends that Section 3(b) of S. 2417 be amended to include federal funding for aviation weather programs as a required subject of Commission consideration. The Administration's 1987 Budget proposed that 70% of the funding for de-

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[1] The following attachments were not reproducible.

velopment of the Next Generation Weather Radar (NEXRAD) come from the Airport and Airway Trust. However, only 49% of the weather information to be generated by NEXRAD will be aviation related. The majority of weather information generated by NEXRAD will assist NOAA and DOD in fulfilling their respective responsibilities. ATCA suggests that an appropriate additional subject of consideration for the Aviation Safety Commission would be to devise a mechanism to assure that all agencies which derive benefits from FAA-developed weather systems share proportionality in the costs of those systems.

Finally, ATCA recommends that flight service specialists be included in Section 3(d) of the bill as a category of aviation specialists with whom the Commission would be directed to consult before reaching its conclusions and recommendations.

ATCA thanks you for the opportunity to express these views.

Sincerely,

GABRIEL A. HARTL,
President.

ASSOCIATION OF SLEEP DISORDERS CENTERS,
July 21, 1986.

Hon. NANCY LANDON KASSEBAUM,
Chairwoman, Aviation Subcommittee, Committee on Commerce, Science and Transportation, U.S. Senate, Hart Office Building, Washington, DC.

DEAR MADAME CHAIRWOMAN: The Association of Sleep Disorders Centers commends you for holding hearings on legislation to establish an aviation safety commission. We believe such a commission is urgently needed and consider this initiative of vital importance to this nation.

We would like to make one suggestion concerning appointments to this commission. As you may be aware, about 25 million American adults suffer from either sleep apnea or narcolepsy. Both conditions are extremely dangerous in that we are finding persons, who operate machinery, drive automobiles and/or pilot airplanes, falling asleep at the wheel. Obviously, falling asleep at inappropriate times is a lethal and intolerable risk for a pilot and for a pilot's passengers. However, today much can be done to ensure that an individual is alert and capable of good reflex and perception abilities. Thus, we strongly recommend that you consider appointing a sleep disorders specialist to this commission.

Dr. William Dement is an individual who has devoted his entire life to the study of sleep-related disorders. You might wish to consider appointing him, once this commission is formed. Dr. Dement is highly respected for his knowledge and vast experience in the field of sleep disorders. He would, without a doubt, make an excellent contribution and be a valuable asset to this commission.

Again, the Association of Sleep Disorders Centers thanks you for conducting these important hearings and looks forward to assisting you in any way we can. Finally, we would ask that our remarks be included in your hearing record.

Sincerely,

MERRILL M. MITLER, Ph.D.,
Executive Secretary/Treasurer.

Tucson, AZ, August 7, 1986.

Hon. NANCY KASSEBAUM,
Chairwoman, Aviation Subcommittee, Committee on Commerce and Transportation, U.S. Senate, Washington, DC.

DEAR SENATOR KASSEBAUM: I applaud S. 2417. It is the most important FAA legislation since 1958. If one complains to the Administrator, or makes a constructive suggestion, the matter invariably is sent right back to the same agency employees who caused the problem, or who have a vested interest in the status quo. And they are experts in dodging the bullet. A commission will, at least for a while, give the public seven sets of attentive ears.

A few suggestions:

1. Commission membership is too narrowly focused: it should not be limited to corporate types; it will need at least one or two law professors or lawyers with in-depth experience in government, constitutional and administrative law.

2. One year is too short; it should be at least 18-24 months. It will take six months for an executive director to get organized and lay out a comprehensive plan

of action. Remember, the best communication with pilots, mechanics and operators is through magazines which need at least two to three months lead time.

3. Require the commission to specifically address the issue whether or not FAA should have a quasi-legislative body to make, recommend and/or review regulations. (See attached memo.)

4. Add to Section 3(d), subparagraphs: (7) private attorneys experienced in safety enforcement legal matters; (8) lawyers, law professors or other educators expert in government, constitutional and administrative law.

5. In Section 4 specifically direct the commission to hold at least two-to-three day hearings in not less than eight regions: (1) Northeast; (2) Mid-Atlantic; (3) Southeast; (4) Midwest; (5) Southwest (Texas); (6) Rocky Mountain; (7) West Coast; (8) Alaska.

Greater emphasis should be placed on enforcement. It is the central problem with air safety. All the management experts in the country cannot improve safety when the enforcement system is too slow, too loose, or too draconian. And a major segment of it has not basis in law.

At a later date, and hopefully before the commission, I will tell you precisely why the present enforcement system is completely inadequate, and how it can be fixed. I enclose my law review article on the subject, which is cited as, Smith, FAA Punitive Certificate Sanctions: The Emperor Wears No Clothes: or, How Do You Punish a Propeller? 14 Transp. L.J. 59 (1985).

I ask that this letter, my law review article, the attached memorandum I wrote concerning the need for a quasi-legislative FAA regulatory body, and the letter from Barry Goldwater, Jr., be made part of the committee's record.

Respectfully,

LAWRENCE B. SMITH.

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